

Sportsman Pilot™



Summer



1989



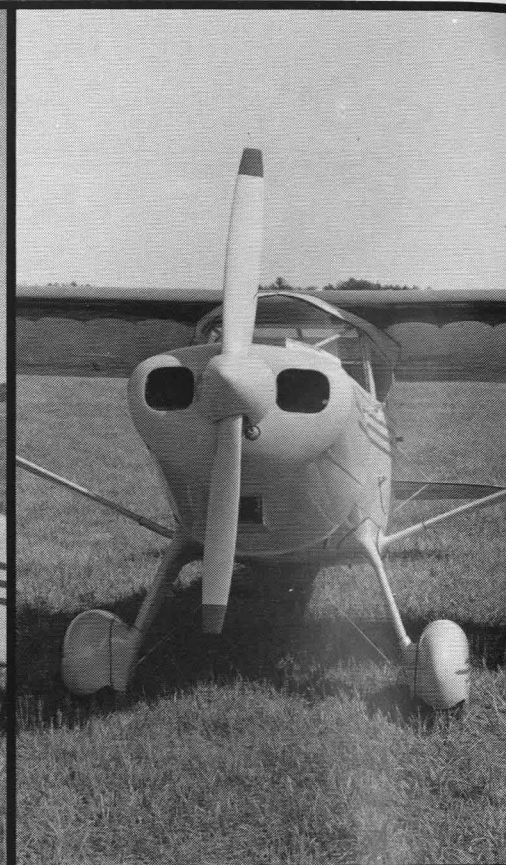
Sportsman Pilot



VOLUME 9

SUMMER 1989

NUMBER 2



ALL ARTICLES AND PICTURES BY JACK COX UNLESS OTHERWISE CREDITED

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Russ Meyer, the chairman of Cessna Aircraft, says old lightplanes are the cause of his industry's problems, and that the FAA should force each of us to rebuild our aircraft every 20 years or so, to the tune of about \$25,000 per airframe! That way, he claims, there would be fewer accidents and, therefore, fewer of our bereaved families suing the lightplane manufacturers and running up the cost of their liability insurance premiums.

First, old airplanes aren't the cause of most lightplane accidents. Poor judgment in bad weather situations, running out of gas and stupidity cause most of them . . . in new

MAG CHECK

as well as old aircraft. And, further, there are few 20 year old moving parts in a 20 year old airplane. Most have been replaced, some several times.

I must really be getting cynical, folks. When I read such statements, I see something else there between the lines . . . something like: "O.K., so you airplane owners won't pay the prices we're charging for our new models . . . well, we'll fix you. We'll get the FAA to force you to rebuild your old clunkers, at . . . heh, heh . . . a price that's

more than they're worth. **Then** you'll have no choice but to buy from us . . . at our price."

The lightplane manufacturers are in the mess they're in today because they priced themselves out of the market about 10 years ago. Every other problem they claim to have stems from that incontrovertible fact. What about product liability, you ask? Serious, yes, but, historically, a fresh stab wound in an already cold corpse.

In short, don't blame your problems on us, Mr. Meyer. Get your own house in order . . . design some new, exciting airplanes.

And reduce prices.



John Underwood has generously allowed us to print two photos from his aviation collection of Amy Johnson, the subject of a book review in our last issue. In one, taken in 1930, she poses in parachute harness with one of the London Aeroplane Club's Moths. In the other, she goes roaring off in her Moth, "Jason III", at the start of the 1931 London-Newcastle race. Noting the height of the grass on the airport, it is easy to understand why the early airplanes had tall, skinny wheels and tires.

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BOOK REVIEW - REVOLUTION IN THE SKY

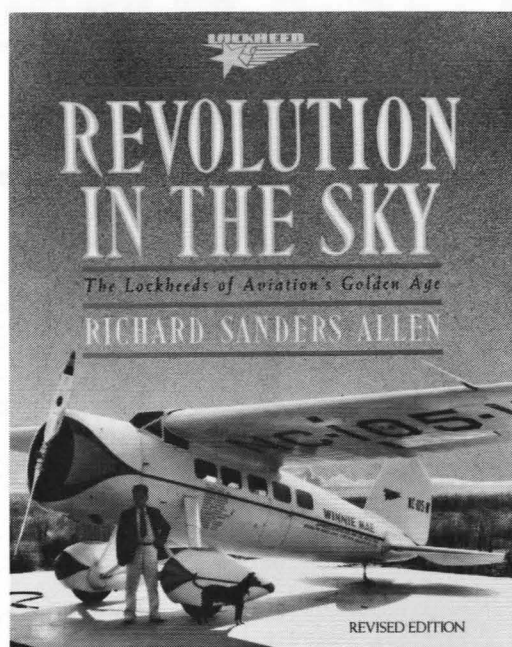
Today, with the aviation world completely awash in new books on everything from paper airplanes to space travel, it is rather amusing to recall the 1950s and most of the 1960s when the release of a new aviation book put aero aficionados into a state of euphoria. I particularly recall the coming of

Richard Allen's **Revolution In The Sky**, a thoroughly researched and profusely illustrated history of the legendary single engined Lockheeds of the 1920s and '30s. First printed in 1964, it was an instant sensation . . . so much so that by the time I learned of its existence, the first printing was already sold out. Bitterly disappointed, Golda and I spent the next three years writing every new and used aviation book seller for which we

could find an address in a vain attempt to locate a stray copy. Mercifully, the book was reprinted in 1967 and this time we had a check in the hands of a book seller months before his shipment arrived from the printer. It was like Christmas morning the day our copy arrived.

To use a badly worn cliché, **Revolution In The Sky** was everything you ever wanted to know about the Lockheed Vega, Air Express, Sirius, Orion, Explorer and Altair . . . the companies and personnel that designed and built them . . . the famous personages who owned and flew them . . . and the stories of their adventures in the powerful monoplanes that were so far ahead of their time. An intriguing and invaluable feature was a short history on each and ever one of the 198 early Lockheed "stars" built, with its final disposition, if known. I've poured over these dossiers innumerable times over the subsequent years, researching particular aircraft for articles . . . and just for the sheer pleasure of reading them once again.

Revolution In The Sky sold for \$12.95 in 1967, which was pretty pricey at the time. The pictures alone were worth the price, however, and I've treasured my copy all



these years.

This spring I acquired a new copy of **Revolution In The Sky**. A revised edition has been printed and if you don't have one of the early copies, then by all means snap up a

new one. It will cost you \$27.95 this time around, but that is considerably less than the prices I have seen recently for used editions. Consider it an investment.

The new edition is essentially the same as the original, with more modern graphics, some additional photos, drawings and statistics. Of special interest is the updating of the histories of each of the aircraft . . . revealing, for instance, that Vega NC13705, Serial Number 203, was bought in 1988 by John Desmond of Philadelphia and is currently being restored!

Pouring over these histories is fascinating work. You learn, for example, that there were **three** Winnie Maes owned at one time or another by Oklahoma City oilman F. C. Hall: Serial Numbers 24, 122 and 133. S/N 122 is **the** Winnie Mae, the beautiful white and blue Vega flown to glory by Wiley Post, and which is enshrined today in the National Air and Space Museum. The other two were sold and after passing through a number of owners, eventually met untimely ends. There is a fourth Winnie Mae, of course: Dave Jameson's Serial Number 72, which is on display in the EAA Museum at Oshkosh. This was the first Executive model (it came equipped

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BACK ISSUES

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Book Review - Amy Johnson, Woodburn Luscombe 8A, Shirey KR-2, C-2/Staggerwing, Schatzie, Barringer Super Cruiser.



with a new Corona typewriter, a folding desk, seats that converted to a lounge, a lavatory and chemical toilet and with extra baggage space!) and was originally purchased by the Independent Oil and Gas Company of Tulsa. It spent the 1940s in Mexico and ended up back in the U. S. in the late 1950s, owned by General Electric and used for some type of classified electronic research. Dave Jameson bought it in 1963 and restored it as the Winnie Mae, complete with Wiley Post's old number, NC105W.

Most of us probably think of Post when we think of the Lockheed Vega, but Amelia Earhart must also be considered. She owned four of them at one time or another and set records in two others. The best known is her "Little Red Bus", NC7952, S/N 22, in which she became the first woman to fly the Atlantic solo. The airplane was displayed for many years at the Franklin Institute in Philadelphia, but now has a place of honor in the National Air and Space Museum.

A rather shocking fact that quickly comes to light when reading the individual aircraft histories is that a high percentage of the early Lockheeds were involved in accidents, most within the first few years of their existence. The culprit seems to have been bad weather . . . and, of course, the rather primitive state of instrument flying in the late '20s and early '30s. The Vegas and Orions were the leading edge of corporate aircraft technology at the time and were owned by companies and wealthy individuals who expected to get maximum use out of them. The price paid for pioneering was high: of the 129 Vegas built, 29 were involved in fatal accidents and many, many more were washed out in non-fatal crashes. 9 of the 35 Orions built crashed with fatalities, the worst of which involved Varney Speed Lines' "East Wind" (S/N 184). Groping through bad weather in an attempt to land at Oakland, it crashed into the city of Hayward, CA killing the pilot, two passengers and eleven persons on the ground.

Large numbers of the Vegas and Orions ended up in other countries. The Vegas became the favorite of Mexican airlines and freight haulers . . . at least in part because local artisans could easily repair their wooden structures wherever they happened to get smashed up. One of author Allen's problems in tracing the histories of the Vegas was the fact that the Mexicans cannibalized so many wrecked airplanes to piece together flyable ones that it eventually became all but impossible to identify a given machine. 13 of the Orions were used in the Spanish Civil

Jimmy Doolittle and the Shelllightning, the only metal fuselage Lockheed Orion ever built . . . and the only Orion left. It is now in a museum in Switzerland.

War and most were destroyed in one way or another.

Today, just seven early Lockheeds remain (not counting John Desmond's restoration project) and all are in museums. Five are Vegas, one is the Lindbergh Sirius and one is Jimmy Doolittle's old metal fuselage Orion, the **Shelllightning** . . . now in bright red Swiss Air colors and hanging in the Swiss Air Transport Museum in Lucerne, Switzerland. There is also the intriguing possibility that the Russians have a Vega stashed away somewhere.

Again, if you don't have a copy of **Revolution In The Sky**, get one while the latest edition is still in print. The early Lockheeds were major players in aviation history and no aviation library is complete without a copy of the book that tells their stories. The revised edition has been printed (appropriately enough) by Orion Books of New York and almost all the aviation book sellers are stocking it.

BOOK REVIEW - ALONE IN THE SKY

Alone In The Sky by Jean Batten was published in 1979 by the Airlife Publishing Company, 7 St. John's Hill, Shrewsbury, England, and was published simultaneously in New Zealand and Australia by Technical Books Ltd., Auckland, New Zealand. The book is based on *My Life* by Jean Batten, published by Harrap in 1938.

In our Spring issue we featured a review of Constance Babington-Smith's biography of British airwoman, Amy Johnson. We've had several expressions of pleasure with that piece, so this time we will highlight the career of another of Great Britain's legendary pilots of the 1930s, Jean Batten. The reason for featuring these pilots from other nations is that we Americans have long tended to assume that virtually no civilian flying ever took place outside the borders of the U. S. and Canada. This is largely a post World War II phenomenon, because Europe had a very active general aviation sector in the 1920s and 1930s and Americans were reasonably knowledgeable on what was going on "over there." If you browse through American aviation magazines from the '20s and '30s, you will find a fair amount of Euro-

pean coverage. Lindbergh, of course, was the great bridge between U. S. and European aviation . . . he inspired pilots and would-be pilots on both sides of the Atlantic and started the era of record flights that did not end until World War II came along. Even in his years of self-imposed exile in Europe after the tragic kidnapping and murder of his son, Lindbergh continued to foster an interest in foreign aviation. American aviation magazines avidly followed his travels around the Continent as he and his wife, Anne, zippered from country to country in their Menasco powered Miles Mohawk. And on the occasion when European pilots, such as Jim and Amy Mollison, Beryl Markham and others made record flights to the U. S., they were given the usual ticker tape parades down 5th Avenue and were lionized in the press just as were our own heroes and heroines. In fact, if anything the British pilots, in particular, were treated even more generously than some of our own native sons and daughters. Until World War II, the U. S. . . . at least those in the Eastern media centers . . . had something of a cultural inferiority complex when it came to the English, and that extended to the small but highly visible world of aviation.

After World War II, however, we Americans came to believe that we were the top of the heap in everything (we won the war, didn't we?) . . . and that, combined with the fact that personal flying had all but ceased to exist in war torn Europe, caused us to look inward and soon forget that other nations also had rich aviation heritages. In fact, with the British Empire crumbling as rapidly as it did in the post war years, we were a little embarrassed that we had so recently looked upon the English as our cultural role models. Within a decade or so, our collective memory was pretty well erased, and, today, few American pilots have ever heard of Amy Johnson, Bert Hinkler, Jim Mollison . . . or Jean Batten.

Today, of course, we live in still another era. The Japanese have supplanted us as the leader in auto production, the Russians are playing baseball, the British are buying up our companies like cinnamon buns in a bakery and . . . well, we are being forced to look at our nation and culture a little more realistically. In the context we are pursuing here, it allows us to once again look outward, to again appreciate the skill and daring of our fellow pilots from other nations. No one is ever going to replace Charles Lindbergh and Amelia Earhart in the hearts and minds of Americans, of course, but with the burden of parochialism at least partially lifted from

our shoulders, we can read books like **Alone In The Sky** and experience some honest admiration for a truly remarkable aviator . . . regardless of national origin.

In many ways, Jean Batten is a very special case. In Shakespearean terms, her hour upon the stage was brief, but the feats she accomplished in the five years from early 1933 until the fall of 1937 were so remarkable that her place in aviation history is assured, no matter what anyone ever does in the future in an airplane . . . or whether Americans know she ever existed. Her records stand out because so many of them were firsts or absolute speed records . . . not just for women, but for any pilot.

- Jean was the first woman to fly from England to Australia and return.

- She was the first woman to fly the South Atlantic . . . and in the process, broke the speed record for the crossing and ended up flying 5,000 miles in 61 and a quarter hours, which was the fastest time for that distance for man or woman in any kind of airplane.

- She was the first person in history to fly from England to New Zealand .

. . . and in the process set the world record for distance and time - 14,224 miles in 11 days and 45 minutes, including a stopover of 2 1/2 days in Sydney, Australia; broke the England to Australia solo record - 10,500 miles in 5 days and 21 hours; and, finally, flew back from Australia to England in a record time of 5 days, 18 hours and 15 minutes, making her the first person, man or woman, to hold the England to Australia and the Australia to England record at the same time.

As late as 1979, Jean **still** held the England to Australia solo record!

Wildly cheered in every nation to which she flew, she was literally covered with medals and decorations . . . presented more often than not by the king or president of the country. She won the Britannia Trophy in both 1935 and 1936 for the most meritorious flight of the year by a British subject, and won the Harmon International Trophy in 1935, '36 and '37 - sharing the award with Amelia Earhart the last two of those years.

She was also a special case in a personal sense. A natural beauty . . . she could have easily passed for a Hollywood starlet or a fashion model (which she was on occasion) . . . and gifted in music, dance and, especially, public speaking, she became wildly popular with the public on many levels. Men proposed, publishers vied for her memoirs, high society coveted her presence at its functions to enhance its own status, government sought to enlist her to promote its programs . . . and the general public simply wanted to adore a role model with the attributes she possessed and the success she had achieved.

Jean Gardner Batten was a native of New Zealand. Born on September 15, 1909 in the town of Rotorua, she grew up in Auckland. The daughter of a dental surgeon, she seemed destined for a career as a concert pianist, but her life took a sudden turn when, at 17, she became smitten by a new passion . . . aviation. Seemingly born with a taste for adventure, she was deeply impressed with the newspaper accounts of the pioneering flights that linked Australia and her own island nation with the rest of the world. When the legendary Charles Kingsford Smith flew

over the Tasman Sea from Australia to New Zealand, she made the decision to become a pilot. The next year, while on a visit to Australia, Smith took her on her first flight. The die was permanently cast from that day onward.

When Jean announced her intention to pursue aviation as a career, she met with great disapproval from her father . . . who refused to fund flying lessons. He began to sense the steel in his young offspring, however, when her response was that at the age of 19, she was old enough to make her own decisions . . . and that she would sell her beloved piano to pay for flight instruction.

In 1929, Jean and her mother, Helen, who seems to have had quite a love of adventure of her own and who would always support her flying activities, took an extended tour through Southeast Asia, India, the Middle East, the Mediterranean and, ultimately to London. Jean's goal was to learn to fly there, and quickly became enrolled as a member of the famed London Aeroplane Club . . . which was where Amy Johnson got her start.

Jean learned to fly in a Cirrus Moth and by the following year, 1930, had earned her A license (roughly the U. S. equivalent of a Private license). Having had the ambition all along to make a flight back to Australia . . . for starters . . . she returned home that year, hoping her proud new accomplishment would persuade her father to finance her dream. The elder Batten, though not a pilot himself, was, nevertheless, astute enough to realize that with only a few solo hours in her log book, Jean was not ready for such an undertaking . . . and refused her every plea.

Undaunted, she returned to London in 1931 and began working on her B or commercial license. With only a modest allowance from her father, she had to systematically hock her personal possessions to keep flying, and felt she was in a sort of race which she could win only if she earned her license before she ran out of jewelry and other trinkets of interest to pawnbrokers. When she was about half way through her training, the deepening world economic depression of the 1930s almost did her in. The exchange rate for converting New Zealand currency into English pounds became such that the buying power of her allowance was reduced to a level that could no longer include flying lessons . . . but, fortunately, her mother came to the rescue. Jean finally got her B license and also completed a mechanics course, much as Amy Johnson had done sometime earlier.

During this period, Jean met a fellow pilot who was sufficiently interested in her plans for a flight to Australia to become her partner in the purchase of a second hand Gipsy Moth. The deal was a 50/50 split of any proceeds from the flight (from the sale of the story rights to newspapers, mainly) and half the money she could earn barnstorming Australia for a full year after arriving there. Such was the optimism of a couple of fledgling flyers!

After months of intensive preparation . . . which would be a hallmark of Jean's subsequent success . . . she set off in April of 1933, and made it non-stop to Rome on her very first leg. Like Amy Johnson before her, this was her first cross-country flight of any consequence, but she proved she was a superb navigator right from the start.

Jean made it to India without major problems, but saw her efforts come to naught when a connecting rod slammed through the crankcase of her engine. She force landed safely . . . and as a result of her bad luck, fell heir to the key to all her future accomplishments. Lord Wakefield, the oil baron who financed so many of the record flights by Britons during the 1930s, had been following her flight with interest and arranged passage back to London for her and the Moth. It was a good thing, because Jean had already hocked her last bauble.

Her partner was no longer interested in Jean's flight ambitions, so the Moth, G-AALG, was sold. With some help from Lord Wakefield, however, Jean was able to purchase one of her own . . . a five year old, fifth hand veteran Gipsy Moth, G-AARB, that had been used and abused all over Europe and the Middle East by previous owners. Jean had the engine overhauled, installed extra fuel tanks . . . and after her usual meticulous preparation, set out again for Australia in April of 1934.

Her second leg, from Marseilles to Rome, ended in one of the more amazing incidents in aviation history. After battling headwinds all the way, Jeaned arrived over Rome at midnight in a torrential rain . . . only to run out of gas! Gliding helplessly down through the storm, she somehow managed to sense the ground in time to flare for landing and bounced to a stop with only superficial damage to the airplane. When daylight came, she found to her utter astonishment that she had lucked into a tiny field, near the edge of which . . . and along her glide path . . . were several tall radio towers and high tension powerlines! Somehow she had slipped unscathed between the towers and wires, and had come to a stop just 75 feet from the big dike of the river Tiber!

Again showing the depth of her resolve, Jean flew her repaired Moth back the London a week later in order to make a fresh start for Australia. She was hoping to set a woman's record, so had to return to the starting point.

"Try Again, Jean", as the newspapers were calling her by this time, launched a third time on May 8, 1934 . . . and 14 days, 22 hours and 30 minutes later, she touched down in Darwin, Australia, the new holder of the woman's speed record for the 10,500 mile course.

The flight had gone reasonably well, with the usual battles with wind, rain, dust storms and heat, plus the hassles with local bureaucracy that plagued aviation even then. Her worst problems were with the monsoons over Southeast Asia. She flew through blinding rain, had to land . . . and take off again the following morning . . . from a flooded jungle runway at Victoria Point, the southernmost point of what was then Burma, and had quite an unusual experience with fog at Batavia in the Dutch East Indies.

Rising early, Jean was disheartened to find a dense fog shrouding Batavia's runway. Knowing she was after a record, the local fuel agent, a Mr. Smet, insisted on using his car to clear a pathway in the fog, through which she could take off. The fog layer, he maintained, was never very deep and once off, she would be on the gages . . . needle, ball and airspeed . . . for only a few moments and could then proceed on her



way. Highly dubious of such an unorthodox procedure, but taken by the agent's unbounded enthusiasm, Jean reluctantly decided to give it a try. After strapping in and getting a prop, she signalled Smet to have at it . . . and he roared off with obvious relish. In her book, Jean described the ensuing minutes as something out of **Alice In Wonderland** . . . with her sitting in her Moth, barely able to see the wingtips, as this mad Dutchman roared up and down the airport . . . unseen and, she was quite certain, unable to see past his hood ornament.

To her amazement, however, the fog actually began to thin along the path the Dutchman was repeatedly traversing . . . and after a few more laps, she found herself sitting at the end of a white walled tunnel that, she later wrote, reminded her of a Biblical picture she had seen as a child of the parting of the Red Sea.

After a final dash, agent Smet pulled his car off to the side and waved Jean off. Impulsively shoving her throttle forward, she sped down the tunnel, lifting off just as she

reached its end. Instantly enveloped in the fog, she later recalled that at that moment she "wished desperately" she had not attempted the take-off. Only seconds later, however, she burst out into blinding sunlight . . . Smet was right . . . and set her course for Darwin.

The rest of the flight, even including an encounter with an erupting volcano and her crossing of the dreaded Timor Sea, was anticlimatic!

A tumultuous welcome awaited Jean when she arrived at Darwin . . . having lowered Amy Johnson's England to Australia time by over 4 days! She did not linger taking bows, however. The following morning she strapped on the little Moth and set out for Sydney . . . a continent and 2,200 miles away. At every stop along the way, telegrams were waiting from friends, fellow pilots, government officials and no less than the King and Queen of England. The reception at Sydney equalled anything any head of state would have been accorded . . . with her remarks broadcast over 30 Australian stations, re-

Probably the most often published photo of Jean Batten. In her book, *Alone In The Sky*, it is captioned, "Taking delivery of Percival Gull G-ADPR 15th September 1935." This was shortly before her flight across the South Atlantic and, ultimately, to Buenos Aires. Note the big fuel tank in the cabin. The photo is usually credited to *Flight* magazine and comes to us from the John Underwood Collection.

notes to all English and New Zealand stations and short wave to the United States. Nor did it end with the grand ball staged that evening in Jean's honor . . . she was swept up into a round of receptions and awards presentations that lasted for days on end and moved from Sydney to Brisbane, to Melbourne and Canberra . . . then started all over again after she and her Moth made the crossing by ship to her native New Zealand, where she was officially greeted by Prime Minister Forbes.

With her Moth reassembled . . . it had fold-

ing wings . . . Jean spent six weeks flying around the country, making 150 speeches and being feted by every school, civic club, and local government that could get a few moments of her time.

Such was world's enthusiasm for aviation in the 1930s . . . and why that decade is now known as aviation's Golden Age.

In October, Jean returned to Melbourne to witness the conclusion of the now legendary MacRobertson England to Australia air race, won by Charles Scott and Campbell Black in the deHavilland Comet, C-ACSS. Quite a good speaker, she had been hired by the Gaumont British Film Company to do what today would be called "color commentary" for the radio broadcast coverage of the event. Having so recently flown the same route herself, she was quite familiar with the airports, terrain and weather conditions the racers would encounter and was thus able to provide knowledgeable progress reports several times a day as the aircraft sped eastward toward Australia. By gile and by no small amount of brass, she managed to beat out her competition to get the first interviews with most of the winners and the other crews as they landed. This went on for 10 days until the last racer finally reached Melbourne . . . and made Jean Batten a household name and a recognizable voice throughout the British Empire.

The following year, she decided to fly her Moth back to England, with the express purpose of selling it in order to purchase a new, faster airplane she hoped to be able to fly to her native New Zealand. Setting out from Sydney in April of 1935, Jean made an uneventful crossing of Australia, but had a dust storm to contend with on the day of her take-off to cross the Timor Sea from Darwin. Luckily, as events would transpire, the visibility was so bad that she was forced to climb to 6,000 feet to clear air . . . because about 250 miles out to sea, her engine quit. Gliding down toward the shark infested water, she tried everything to get the Gipsy going, but to no avail. Descending through a cloud deck, she broke out at 3,000 feet to come face to face with what she feared was soon to be her watery grave. Untying her shoes and flying suit, she unsheathed a small hatchet she carried in the cockpit . . . in hopes that should she go down at sea and survive the ditching, she might be able to climb out, chop off a wing and use it as a raft. As she neared the wavetops, however, the engine burst to life as suddenly and as unaccountably as it had quit . . . and continued to run for the next three hours of over-water flying, with Jean "scarcely daring to breathe lest I should break the spell."

Landing at Kupang in the Dutch East Indies, she went over the engine thoroughly, cleaning the jets and filters, but never really learned the cause of the engine stoppage. Probably the dust ingested flying out of Darwin, she surmised, but could not be certain. She admitted in her book to having been ". . . shaken . . . more than I cared to admit or fully realized" and her old confidence did not begin to return until she neared England. With good reason, too, because the engine mysteriously quit and restarted several more times along the way. (Significantly, Jean does not mention the possibility of carb ice in her book . . . a phenomenon not well understood at the time.)

After being fogged in for two days at Dijon, France, Jean finally arrived back in London on April 29, 1935 . . . the first woman to fly to Australia and return.

After surveying the field of English lightplanes available at the time, she finally made up her mind and on the day of her 26th birthday, September 15, 1935, took delivery of a brand new 200 hp Percival Gull, G-ADPR. The Percival plant was at Gravesend in Kent, which was almost on the Greenwich or Prime Meridian. Jean considered this to be a good omen since she had to use Greenwich time on all her long distance flights.

As has been pointed out in earlier issues of **Sportsman Pilot**, the Gull was in its time one of the most remarkable lightplanes ever conceived. Indeed, its performance specs compare favorably with the early model Bonanzas of about the same power, even though the Gull had a fixed gear. Only a relative handful were built, but those that were set records almost weekly in the late 1930s.

G-ADPR, to become the most famous Gull of them all, cost Jean 1,725 pounds, which she later wrote was "practically every penny I possessed." Fitted with extra fuel tanks, Jean initially intended to use it to fly some 8,000 miles to Buenos Aires . . . down the coast of Africa, across the South Atlantic and down the east coast of South America to Rio de Janeiro and, ultimately, to the Argentine capital city.

The two heart stopping adventures of that epic flight were the night take-off at Thies, West Africa and an encounter with some sort of electrical disturbance while crossing the intertropical convergence zone in mid ocean.

Even though she meticulously planned the flight, as always, Jean landed at Thies to find a completely different situation than had been reported to her. Once a large Air France waypoint, the runway had been allowed to grow up in grass and scrub . . . and her fuel supply had not been delivered. Local officials had assumed she would be jumping off across the Atlantic from nearby Dakar and had stashed it there. Rightly upset, Jean demanded it be delivered **that night** so she could make a pre-dawn take-off . . . which was ordered by the incredulous but sympathetic French Commandante.

After supervising the "schedule" on her engine by local mechanics and laborously hand pumping and straining 140 gallons of the finally delivered fuel into the Gull, Jean began unloading all her tools, spare parts and survival gear in order to lighten the load for take-off from the overgrown airport. She kept only some emergency rations, a thermos, her RON kit . . . and two evening dresses. Her reasoning was that if she made it across the Atlantic, she would need the dresses . . . and if she didn't, the other stuff wouldn't matter very much.

After just 3-1/2 hours of sleep (unlike a lot of other famous flyers, Jean had no trouble sleeping before her flights), she awakened to find a light rain falling, which, of course, would add to her difficulties taking off. At the airport, she fired up the Gull and was slowly led through the tall wet grass to the far end of the runway by two mechanics afoot with flashlights. At the other end, the Commandante placed his car and a truck with their headlights aimed at Jean. She was to attempt the take-off toward them . . . knowing that if she were not off by the time she

reached them, disaster was imminent.

So, there she sat . . . surrounded by 140 gallons of gasoline . . . in rain and pitch darkness . . . with no wind to shorten the take-off roll and help get her over the dark wall of jungle ahead . . . in an airplane that was a notable ground looper . . . with nothing more than a couple of pairs of dim headlights to guide her. From the secure perspective of our armchairs, it is difficult to imagine the terrible ambition that drove a young girl with most of her life still ahead of her to risk it so certainly . . . to shove the throttle forward and go plunging into the perils of the darkness . . . only to face 1,900 miles of open ocean if she managed to make it over the trees.

The Gull strained against the pull of the wet grass and accelerated so slowly that Jean feared the tail would never lift. When at last it did, she tried to pull the airplane off, but it sank heavily back onto the runway. Pushing the stick forward again, she let the speed build up until the very last instant she dared, then made one last desperate attempt to haul the plane off. Somehow the Gull flew and Jean was cool enough to lower the nose and allow a little speed to build up before she attempted to vault the onrushing trees, which even close up were little more than a darker line at the base of a dark sky. Probably sending the tree dwelling jungle creatures into a panic, she just skimmed through the leaves of the top most limbs . . . but made it to the relative safety of altitude.

The flight across the South Atlantic was fraught with risk. The distance was about 1,900 miles and the Gull, with the extra tankage installed for this flight, had a still air range of about 2,000 miles. Even as flightplanned, Jean would switch to her last hour's fuel before sighting land, and if she had any finger nails left to bite at that point, would be nibbling furiously until the low lying Brazilian coastline appeared on the horizon. In order to make it across with such a razor thin margin for error, she planned to fly as low as possible . . . like 50 feet . . . to minimize the adverse effect of wind drift and planned absolutely no deviation from the corrected rhumb line she planned to steer . . . no matter what sort of weather she encountered. According to her calculations, even 1/2 degree of deviation north or south of her magnetic track would mean an error of 17 miles when she reached the Brazilian coast. Even if all went as planned, there was only one airport, Port Natal, within reach once she made landfall, so there really was no margin for error whatsoever. She might make the coastline and have to land on the beach, but to Jean that would have been totally unacceptable. In her mind, she either met her goals of breaking the record from England to Brazil and setting the speed record across the South Atlantic, or the flight was a failure.

On a heading of 242 degrees, she sped through the early morning hours, greeted the dawn . . . and soon afterwards plunged headlong into the first of a daylong succession of tropical rainstorms. The torrent of water in each was so intense that she could not see the Gull's wingtips, which caused her to have to climb to avoid flying into the ocean while on the gages and in severe up and down drafts. Particularly stressful was the fact that no sooner had she broken out of one storm than the next would be visible ahead. It was a maddening sequence of tre-

vail interspersed with awful anticipation of the next, a kind of Chinese water torture on a gigantic scale.

About halfway across the South Atlantic, Jean noted with horror that her heretofore faithful compass was beginning to swing around the dial. To follow it, she knew, would lead her in a circle . . . and far off her no margin for error course line. In a storm at the time, she had no alternative but to try to continue straight and level flight by means of her turn and bank indicator . . . all the while knowing she could not continue this for another thousand miles. Either the compass righted itself or all was lost.

To her intense relief the compass did soon resume normal operation and Jean was able to continue battling the successive storm cells. She later learned from veteran pilots that problems with compasses in electrical storms near the equator were fairly common . . . and, mercifully, of short duration.

Ploughing ever onward through storm cell after storm cell, the day wore on until at the 12-1/2 hour mark, Jean switched to her last tank of fuel. Exhausted and suffering from severe eye strain, she spent the next half hour enduring the unthinkable. Was land going to appear on schedule . . . or was she off course enough that her fuel would run out before she made landfall? Was that line on the horizon really land . . . or were her tired eyes playing tricks? Finally, a thin yellow line appeared on the horizon and in a few minutes the Gull was flashing over the beach . . . just a half mile south of the Cape San Roque lighthouse, her intended landfall! It was one of aviation's more remarkable feats of navigation. When she landed a few minutes later at Port Natal, Jean had been in the air for 13 hours and 15 minutes . . . with a total elapsed time from England of 2 days, 13 hours and 15 minutes, the latter a full day less than the previous record set by Jim Mollison. The time from Thies to Port Natal was a record for any type of airplane, including that of the mail planes that were flying the South Atlantic at the time.

Interestingly, in her book Jean states that she considered flying on to the United States from Natal, but because of the added expense involved, decided to fly to Rio de Janeiro, Montevideo and Buenos Aires instead. In retrospect that was probably a bad decision because she undoubtedly could have picked up all sorts of commercial endorsements in the U. S. . . . maybe even a movie contract. In any case, her South American tour was a rip roaring success. She was wined, dined and decorated by the heads of state in each of the nations she visited and was made an honorary member of their air forces. When at last she and her Gull set sail for England on the liner Asturias, she was at least momentarily the most widely lauded personage in all of Latin America.

Back in London, Jean began preparing for her greatest triumph, a flight that she had dreamed of as a child . . . the first direct flight from England to her native New Zealand. While the Gull was being overhauled for that adventure, she flew by airliner to Paris to receive the plaudits and decorations of the French nation, in the company of such aviation greats as Louis Bleriot, Louis Paulhan and others. After her return to London, she and her mother took the Gull on an extended vacation to Spain and North Africa that in-

cluded a side trip to the island of Majorca . . . a seemingly innocent interlude that would have great portent for Jean's future.

Once back in London, Jean began intensive final preparations for her flight to New Zealand. Ahead of her time in many respects, she had always included physical conditioning in her preparations . . . "skipping exercises and daily walks", according to her book. For this trip, she and her mother went on a week long walking tour of the English countryside, averaging ten to fifteen miles a day. All of Jean's record flights were real marathons during which she rarely slept more than three or four hours each night. How she could stand such a pace for days on end was unquestionably due to her conditioning . . . and, of course, her youth.

At 4:20 a. m. on the morning of October 5, 1936, Jean and her Gull roared off the runway at Lympne (pronounced "lim") and headed for Auckland, New Zealand, 14,000 miles away. She flew 1,330 miles to Brindisi, Italy the first day without incident, but was forced to land short of her destination, Baghdad, on Day Two by a terrific sand storm. Fortunately, she spotted a pumping station on the Asiatic Petroleum Company's oil pipeline called H.3 and landed on its desert runway. On Day Three, Jean flew 1,380 miles to Karachi, which was in India in those days . . . and after just 2-1/2 hours of sleep was up and off the following morning, headed for Allahabad and, at last, to Akyab, Burma, a total of 1,900 miles. At 1:00 a. m. on Day Five, she took off along a flare path and headed through the darkness to Singapore. On the way, she flew through rain so heavy it eroded the fabric overlay on the leading edges of her wings right down to bare wood. At her fuel stop at Penang she patched the leading edges with adhesive tape from her first aid kit and flew on to Singapore. That evening . . . without having slept since leaving Akyab . . . she set out again and flew all day to Kupang in the Dutch East Indies.

After refueling at Kupang, natives who were trying to be helpful, pushed the Gull backwards to a tiedown area and punctured the tailwheel tire on a sharp stone. Without a spare tube the flight could have been delayed for weeks awaiting the arrival of a new one . . . just 530 miles from Australia and a new speed record from England. The Dutch fuel agent came to the rescue, however, by packing the tire with sponges, which allowed Jean to fly on to Darwin the following morning, arriving there on October 11 . . . just five days and 21 hours out of England. This lowered Australian Jimmy Broadbent's current record by a full day.

Flying on across the Australian Outback, Jean reached Sydney in a record 8 days out of England, and promptly turned her Gull over to the deHavilland subsidiary there to have the engine thoroughly gone over in preparation for the 1,330 mile overwater flight to New Zealand.

So famous was Jean at this point in her career, that she had been greeted by huge crowds at every stop of significance, and in Sydney there was a concerted effort to dissuade her from making the perilous flight to New Zealand. The Tasman Sea harbors some of the world's most violent weather . . . why should she risk her life for one more laurel, friends asked.

"The honour of completing the first solo flight from England to New Zealand and linking the two countries in direct flight for the first time in history," was her obviously long considered and practiced reply.

Wires came in from all over the world pleading with Jean not to attempt the flight, but she was not to be denied her dream. Even the government stepped in, asking for an endorsement to her airplane's Airworthiness Certificate authorizing a take-off at 1,000 pounds over gross weight . . . but Jean had anticipated this eventuality and promptly put the matter to rest by producing the requested document. 2-1/2 days after her arrival in Sydney, she was poised on the Richmond Aerodrome, ready for take-off for her homeland. The previous night, for the first time in her life, she was unable to sleep . . . not because of any anxiety over the flight, but because of the tramp of a sentry's boots outside her hotel room door, a sentry assigned to insure that she would get a good night's sleep! Before taking off, Jean told the press, "If I go down in the sea, no one must fly out to look for me. I have chosen to make this flight, and I am confident I can make it, but I have no wish to imperil the lives of others or cause trouble or expense to my country."

Taking off in the pre-dawn darkness of October 16, 1936, Jean watched the lights of Sydney disappear behind her and felt tremendously lonely when at last she was the solitary occupant of a vast dome of sky with only the ocean visible below. For the first few hours the flight went well, but inevitably the Tasman began to live up to its terrible reputation. Storms began to close in around the Gull and soon Jean was battling her way through successive storm cells just as she had in crossing the South Atlantic. Turbulence was a greater problem this time, however, and as the day wore on, her arm began to ache from the constant struggle to keep the airplane upright and on course. She was also experiencing quite a bit of wind drift, and frequently had to drop down low enough to study the wind streaks on the waves and change course accordingly. A leaking wing tank was discovered during the flight, but Jean had a large fuel reserve in the Gull's other tanks so she simply switched to the leaking tank, burned it down, switched to another tank and flew on.

The stormy weather persisted all the rest of the flight, but at last Jean flashed over New Plymouth . . . **precisely** on course after 9 hours and 29 minutes over the raging Tasman Sea! Turning north, she flew another 154 miles to Auckland and landed there to the cheers of a vast multitude of her countrymen . . . 11 days and 45 minutes out of England. Over 1,700 overseas cables awaited her, and the services of four secretaries were required for several weeks to simply acknowledge the additional thousands of messages of congratulations that came in from all over the world. Jean had financed this flight herself, however, so she had to cut the adulation short and immediately start out on a public appearance tour to get her finances back in the black.

The flight to New Zealand was Jean Batten's greatest triumph . . . "the greatest moment of my life," as she described it in her book. "The triumph of the flight had been complete, and I felt a desire to stay the hand

of time and enjoy to the full this hour of success."

It was not her last hurrah, however. The following year, 1937, while on vacation in Australia, her wanderlust got the best of her again and she decided to fly back to England . . . and since she was going that way, she might as well try for the Australia to England record. In some respects, this proved to be Jean's most amazing flight. Certainly it was from the standpoint of the physical demands she placed upon herself. Leaving Darwin, she flew for stretches of a day and a half at a time, stopping only for fuel and a quick bite to eat. On one of these enduros, she flew 2,150 miles from Rangoon to Karachi . . . slept 4 hours, then flew on! The physical strain was heightened by the fact that she was battling bad weather and headwinds all the way. Crossing Lebanon, she encountered a storm so fierce that even she decided to turn back . . . for reasons she was later unable to explain. Someone was looking out for her, because she later learned the airport on Cyprus where she had intended to land was flooded. Forging onward the following day, she flew through some of the worst weather of her flying career over the eastern Mediterranean, complete with water spouts and her first encounter with St. Elmo's Fire. It was almost as bad over Italy, but at last she broke out and had a relatively easy flight across France and the English Channel to England. Incredibly, when she touched down at Lympne Aerodrome, she had lowered her own eastbound time between England and Australia . . . against the prevailing headwinds. Her time from Darwin was 5 days, 18 hours and 15 minutes, and she had become the first person to hold both east and westbound solo records at the same time. Clearing customs, Jean flew on to London's Croydon airport where she was met by still another huge crowd . . . including her mother who had sailed on ahead from Australia in order to be there to greet her. In the months that followed, Jean was swept up in one last great whirlwind of public appearances, awards presentations and audiences with European royalty. She was even interviewed on one of the world's earliest telecasts. This was late 1937 and early 1938, however, and the clouds of war over Europe were growing ever darker. Though she probably did not realize it at the time, Jean Batten's spectacular flying career had come to an end . . . even though she was a mere 28 years old. She wrote her book, **My Life**, which was published in 1938 (and reprinted as **Alone In The Sky** in 1979), but as the events of her life would unreel, the decade of the 1930s was her golden age . . . as it was for aviation.

When war came, Jean, of course, wanted to fly. The British government would not hear of it, however. At the peak of her popularity, she was too valuable in a public relations sense to risk in some mundane flying role. With the casualties that war would soon begin to pile up, what would be the effect on public morale to also lose the great Jean Batten to some needless training or ferrying accident . . . as would later be the fate that befell Amy Johnson? Jean was particularly adept at what we now term motivation enhancement . . . and was soon off on tours making inspirational speeches to boost the morale of both the troops and workers in war

plants. It was not her choice, but being a very patriotic Briton, she did her duty. This denial of her continued participation in the passion of her life . . . "My only love is aeroplanes," she frequently told reporters . . . left its scars, however. For her own very personal reasons, she never piloted an airplane again . . . despite the fact that her beloved Percival Gull awaited the touch of her practiced hand (it still exists today, a part of the famed Shuttleworth Collection) and the fact that she was an avid reader of aviation books and magazines for the remainder of her life.

Jean never married, and, in fact, as she grew older, she began to withdraw from all personal associations. Her one really close relationship was with her mother, especially after her divorce from her father. In the post war years, the two of them settled into an increasingly reclusive life together, first in Jamaica and then for many years in the Canary Islands. Jean maintained occasional contact with her aviation friends and in rare appearances back in London, seemed her old personable, flamboyant self, but as the years rolled by, the visits became fewer and further between, especially after her mother's death in 1966. So reclusive did she become, in fact, that she began to be known in Britain as "the Garbo of aviation." Finally, in the late 1970s she began warning friends that she would soon simply drop out of sight altogether . . . and in 1982 she did just that.

Jean was last seen that year on a commercial flight from England to the island of Majorca off the east coast of Spain. Her last known communication, a note to her accountant in England concerning a donation to a transport museum in Auckland, was postmarked at Majorca on November 8, 1982 . . . then nothing. Absolutely nothing for five years. For a time her friends thought little of the lack of contact with Jean . . . it was her modus operandi, after all . . . but after a time, they began to worry. For one thing, there were no drafts on her account at Barclays Bank in London and she never drew a penny from the special pension awarded her by the New Zealand government. Eventually, inquiries began to be made, first by friends and relatives and , later, by both the British and New Zealand governments, but all came up empty handed. It was as if Jean Batten had simply vanished off the face of the earth.

By the mid-'80s, she was back in the news again, with speculation as to her whereabouts . . . or fate . . . growing by the day. The public loves a mystery . . . witness the continuing interest in the fate of Amelia Earhart . . . and British newspapers never missed an opportunity to fan the flames. London's **Sunday Times** sent out its own investigative reporter, Tim McGirk, in search of Jean Batten, but he, too, eventually came home empty handed. Ending up in Majorca, he checked with Spanish authorities, combed through obituary records . . . but found nothing. His resulting article on February 1, 1987 was filled with speculation, but brought the world no closer to finding Jean.

It finally fell to Caroline Mackersey, the wife of a New Zealand TV producer, to solve the mystery. On a hunch, she typed a simple letter in basic Spanish, requesting information on the fate of Jean Batten, had it signed by Jean's nephew, Rick Batten, and put it in the mail. Incredibly, a prompt reply included

a copy of Jean's death certificate! Subsequent investigation revealed that Jean had maintained a small apartment on Majorca since the mid 1960s and apparently died alone there of natural causes sometime in late November of 1982. A housekeeper found her body on the 22nd. The Spanish authorities, noting her New Zealand passport, wrote that nation's embassy in Madrid in an attempt to notify family or friends . . . but unaccountably never received a reply. Finally, in January of 1983, one of the greatest fliers of aviation's Golden Age was laid to rest in the city of Palma on the island of Majorca . . . in an unmarked communal pauper's grave.

The "mystery" of Jean Batten's last years thus was not really a mystery at all . . . just an unfortunate case of bureaucratic oversight or, possibly, simply a communication lost in the mail. In any case, it was probably the way Jean would have had it. Her fame had come when she was in the flower of youth, at a time when her beloved aviation was in its most glorious age. Nothing could bring back those days, nothing could ever equal her previous triumphs. She knew her place in history was secure . . . so she likely chose to end her days in a place of natural beauty and of fond memories of her youth.

A postscript to the Jean Batten story is the fact that Energy Source Television and Television New Zealand recently commissioned film producer Ian Mackersey (husband of Caroline, who solved the Batten "mystery") to make a 52 minute documentary on that nation's greatest aviation personality. To flesh out the old newsreels from the 1930s, Mackersey had three champion model airplane builders construct quarter scale RC models of Jean's two Gipsy Moths, G-AALG and G-AARB, and her Percival Gull, G-ADPR, to recreate flying scenes. Filmed in flight from helicopters and off seaside cliffs, the models are said by the British magazine **Radio Control Scale Aircraft** to be very, very realistic. To be titled **Jean Batten, The Garbo Of The Skies**, the film is still in production. When it is released, we can only hope we will get to see it in the U. S. and other nations as well as New Zealand.

Thanks to Group Publisher Ron Moulton of Argus Specialist Publications, Herts, UK for the information on this film.

PERSPECTIVE

According to the FAA's latest figures, the total U. S. civil aircraft fleet, which includes all air carrier and corporate aircraft, consists of just over 290,000 machines. About 225,000 or so are general aviation aircraft, the majority of which are registered to individuals . . . or by individuals in the name of their small businesses, in an effort to write off some expenses. As anyone who has been around aviation longer than a fortnight knows, most are used for pleasure flying, tax writeoffs notwithstanding. In a population rapidly nearing 250 million, the number of U. S. civil aircraft is not very impressive. For perspective, consider some numbers from the world of recreational boating: According to **USA TODAY**, the state of Michigan alone has 746, 979 registered boats! California fol-



lows with 708,849, Minnesota with 673,503, Florida with 644,813 and Texas with 606,370. The U. S. has a total of ten million registered boats . . . **ten million!** As I like to point out at every opportunity, recreational boating has most of the same problems that general aviation suffers: new equipment and parts are expensive, adverse weather is a hindrance to operation, storage is scarce and expensive, launching sites are not as numerous as they ought to be and often do not offer adequate services, neighbors complain about noise . . . and both boats and aircraft operate in mediums which are alien to humans and definitely hazardous to their well being. Both experience fatalities . . . but, parenthetically, nothing even approaching the number killed each year in automobiles.

So . . . why are there so many more boats than airplanes? I believe the principal reason is that boating is not burdened by an oppressive Federal bureaucracy that stifles technical innovation and greatly increases costs . . . and brings a police state methodology and mentality to the enforcement of even the most innocuous of regulations. In plain terms, the FAA annually turns away potential pilots in droves. U. S. citizens don't **have** to put up with being considered guilty until they prove . . . at their own considerable expense . . . that they are innocent, so they don't.

TENNESSEE AIR TOUR 89

The Tennessee Department of Transportation, Office of Aeronautics, will sponsor Tennessee Air Tour 89, scheduled for September 8, 9 and 10, 1989. All pilots, their families and friends are invited to participate. No registration fee will be charged; all expenses will be handled on an individual basis. Tour schedules and information are available from Kathy Sloan, Office of Aeronautics, Tennessee Department of Transportation, P. O. Box 17326, Nashville, TN 37217, phone: 615/741-3208.

FLO IRWIN - IN MEMORIAM

We regret to note the passing on June 10 of Flo Irwin, the founder and throughout most of its existence, the president of Aircraft Spruce & Specialty. Flo died of cancer at the age of 69 at her home in Lake Havasu City, AZ.

A native of Rochester, NY, Flo moved to California in the early 1950s. She met her husband, Bob Irwin, there and together they founded and operated Fullerton Air Parts for many years. They sold that business in 1965, but soon tiring of inactivity, Flo began selling aircraft quality spruce out of her basement. That business ultimately evolved into Aircraft Spruce & Specialty, one of the oldest and most respected full line supply houses supporting homebuilt and vintage restoration activity.

Eddie and Gloria Swarthout's Staggerwing and John McCulloch's D-145 Monocoupe.

Flo and Bob moved to Lake Havasu City in 1985, leaving Aircraft Spruce & Specialty in the capable hands of their son, Jim . . . and established still another company, ACS Products, which manufactures a wide range of supplies to original equipment manufacturers and distributors nationwide.

The world of sport aviation is more personalized than most, and for the past four decades, Flo Irwin has been one of its better known and beloved personalities. A significant era has ended with Flo's passing, but she laid the foundation that insures that her work will continue.

Our condolences to the Irwin family.

BURLINGTON '89

The Spring Fly-In of the EAA Antique/Classic Chapter 3 was held at the Burlington, NC Municipal Airport on the weekend of May 5-7 . . . the weekend a line of vicious thunderstorms and tornados ravaged the state. Fortunately, none hit the airport, but the weather in surrounding areas kept attendance down. The show did go on and a number of beautiful vintage airplanes were



Sitting back in a corner of a hangar at the Burlington, NC airport is a 1931 Curtiss Wright Travel Air A-14-D Speedwing owned for most of its existence by Allen H. Watkins, Jr. of Greensboro, NC. Only recently restored by Jim Kimball at Zellwood, FL, it does not appear to have been flown lately . . . note the protective wrapping on the propeller. Powered by a 7-cylinder Wright J6-7 (R-760) producing 240 h.p., it was supposed to be capable of cruising at 130 mph and topping out at 150. NC12329 was one of 7 or 8 A-14-Ds built. The logo on the side of the fuselage

is one of the old Sportsman Pilot magazine personal crests from the 1930s. The magazine kept a register of the crests and published them occasionally. All were shaped the same, differing only in the little circle at the top which symbolized the pilot's home state (in this case the Wright Brothers monument at Kitty Hawk for the state of North Carolina), and the crest, itself, in which the pilot put whatever he wanted. In this case, Allen Watkins put in a "W" and an eagle as his personal "vanity" identifier. Pretty neat, huh?



on hand . . . including John McCulloch of Naples, FL in his D-145 Monocoupe and Eddie and Gloria Swarthout of Tavares, FL in their Staggerwing Beech, both of whom arrived a day ahead of the bad weather.

Saturday was a pretty decent day until early afternoon when a little wave pushed through, accompanied by gusty winds and a brief shower or two. Right in the middle of it we heard the muffled thunder of two R-985s in unusually close formation . . . but moving much slower than the Staggerwings, Spartans, Howards and such we normally associate with those big ol' radials. In the Carolinas . . . or anywhere else in the world today . . . that sound meant just one airplane,

Coke Darden's Douglas Dolphin. The sole remaining example of the type, it is a sensation wherever it appears, but on this day and in the conditions that existed at the time, it **really** had everyone's undivided attention. Although said to be agile on water, the Dolphin, with the weight of its engines so high up over the wing and a very soft, long throw landing gear, is a big waddling duck on pavement even in the best of conditions, but in this wind . . . well, everyone knew Coke was going to have his hands full. He made a fine approach and for a moment it appeared he might get it down between gusts, but no such luck. Just as he was beginning to flare, he was practically stood on a wingtip . . . which

was a pretty awesome sight involving as it did a big deep hulled amphibian with a 60 foot span! Somehow, Coke wrestled the beast more or less level an instant before it smacked the runway . . . and bounced like a gigantic Cub! He got it on the mains on the next bounce and did a magnificent job of saving the rest of the landing. I had the opportunity to fly the Dolphin for a few minutes back in 1973 when it was being shown for the first time following its complete restoration, and I can tell you that it is not the most responsive airplane I've had my hands on. If I had been carrying an Air Medal around in my pocket that day, I would have pinned it on Coke for that landing.

When the trophies were handed out that evening, Coke was not rewarded for his superior airmanship, but his Dolphin was named Grand Champion . . . and appropriately enough, since it is the only one left, the Rarest Aircraft.

The Douglas Dolphin was first certified in 1931 with a couple of 300 hp Wright radials, and a number of improved models with larger engines received type certificates over the next couple of years, culminating with the P&W Wasp powered Model 10. Designed for the military, the Dolphin was very ruggedly built, with a metal hull and a thick, one piece wood wing. The later Wasp powered versions grossed out at a none too svelte 9,500 pounds.

No doubt with their fingers crossed behind their backs, Douglas management offered "Executive" versions of the various models of Dolphins . . . probably on a "if you have to ask the price, you can't afford it" basis. Considering the fact that the airplane was introduced in the very depths of the Great Depression when many of its previously potential customers were jumping out of windows on Wall Street, the sales staff likely earned fat bonuses for selling 7 Dolphins to individual civilian owners. 59 Dolphins were built; 47 for the Army, Navy and Coast Guard, 5 for the Wilmington-Catalina Air Line and the 7 aforementioned individuals. A measure of just who you had to be to afford a Dolphin in the early 1930s is perhaps best taken by dropping a few names like William K. Vanderbilt (railroads), Powel Crosley, Jr. (radios, refrigerators and, later, midget cars) and William E. Boeing (Boeing Aircraft). Their Dolphins were literally flying yachts, with nothing spared in the way of amenities. Boeing's Dolphin was actually used as a tender for his *real* yacht, which gives us an idea of what it must have been like!

Coke's Dolphin is William Boeing's old NC14205, Serial Number 1280. Nicknamed "Rover", it was completed on July 30, 1934. The amenities built into this aircraft made it sufficiently different from the standard models that the Department of Commerce required that it be certificated on a special Group 2 approval (2-482). The original engines were P&W Wasp S3D1s rated at 450 hp each. These engines were not the 450 hp R-985s familiar to us today, but, rather, an early version of the R-1340, which was later uprated to 650 hp for use on aircraft such as the T-6. Higher octane fuel that came into use in the late 1930s allowed many of the engines of that day to be increased in rated power.

Boeing used Rover until the onset of World War II when it was sold to the CAA "for the duration", to use a term common at the time. Renumbered N26, ol' Rover spent the war years in Alaska and at some point was converted to smaller, more modern R-985s and props. Rated at 450 hp each, they provided the same power as the earlier, larger Wasps. After the war, the airplane was resold on the civilian market . . . re-registered as N26K . . . and ended up in California where it labored for years hauling tourists between Lake Tahoe and San Francisco and Long Beach and Catalina Island. In 1968, Rover, now 34 years old, was ferried across the U. S. to the West Indies for use in charter service. A few years later, however, it ended up in Miami, owned by Dean Franklin. When Coke Dar-

den saw it for the first time, the fuselage was sitting outside, the wing was in a hangar on sawhorses, and the fuel tanks were up on some shelves. The rest of what Franklin claimed belonged to the Dolphin was in a heap on the floor, with propeller blades and seat backs sticking out at odd angles. Coke was assured an airplane could be made to emerge from the mess, so he bought it and commissioned Franklin to perform the resurrection. It took about 4 years, but Rover did fly again, with its original number, NC14205, returned to its flanks.

Flown to its new home near Columbia, SC in the summer of 1973, it was placed in a waiting hangar on Coke's private strip . . . a specially built round hangar with pie shaped spaces of the proper dimension for each of his airplanes: a Meyers OTW, a Spartan Executive, Lockheed 12A, Douglas DC-2 and the Dolphin. That fleet remains intact and airworthy today and individual aircraft are frequently seen at East Coast fly-ins. The DC-2 was used several years ago by the Dutch KLM Airline to recreate its participation in the 1934 MacRobertson race from England to Australia.

Asked for some real world performance figures, Coke responded, "I think it must cruise at about 95 knots with the floats on and maybe 100 knots with the floats off . . .





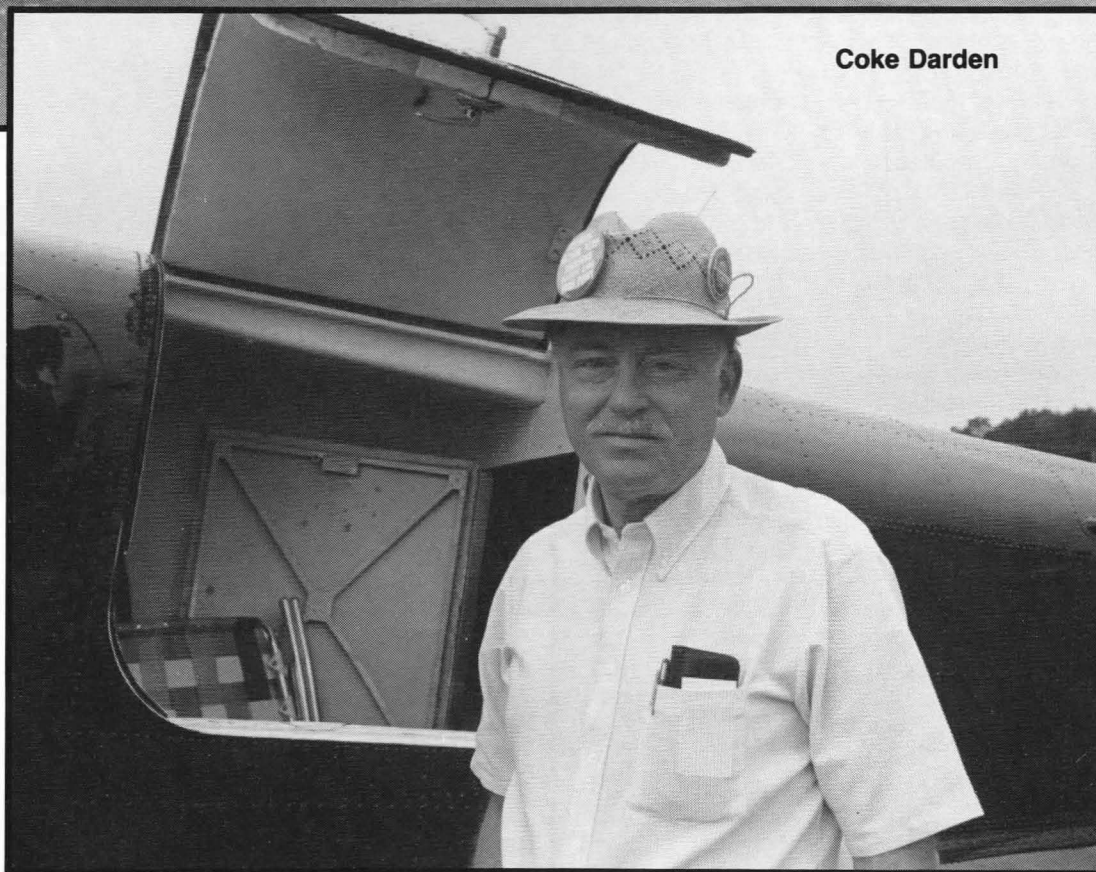
COKE DARDEN'S DOUGLAS DOLPHIN

and that's using 260 hp per engine. I've never really been able to figure out what the rate of climb is, but 500 fpm is probably about all you can expect. Descent is somewhat faster. People who know have told me it behaves quite well on water. I have landed it on water a few times, myself, but I just haven't had time to get a water rating. I've gotten along without it for 20 years, so I'm not in a big hurry.

Coke Darden . . . Dr. Colgate Darden, to be more formal . . . is a nuclear physicist on the faculty of the University of South Carolina in Columbia, and is a collector of antique cars as well as airplanes. He hasn't bought an airplane in 20 years, so he says he thinks he is cured. He just tries to keep the ones he has airworthy and ready for an occasional outing . . . between his trips to universities and research centers around the world to pursue mankind's efforts to solve some of the fundamental riddles of the universe.

MERCED '89

This year our annual spring trip to California was a little different . . . we attended the Merced Fly-In to gather material for **Sportsman Pilot** as we always do, but the following week was devoted to several assignments for EAA. The trip to Merced was by what has become our normal means of transportation to that event: Ken and Marie Brock's 230 hp Stinson 108-3. This beautiful red and maroon restoration has won a ton of trophies over the past few years and still attracts a crowd whenever and wherever it



Coke Darden

lands. With a terrific rate of climb, even with a full load of fuel and passengers, and the stable, comfortable ride the 108 series has always been known for, the airplane is the best of many worlds: it is a custom classic that wows fly-in goers, yet is a useful transportation piece.

Arriving at Merced at mid-day on Friday, June 2, we were fortunate to find a good parking spot in the Classic area . . . or anywhere, for that matter. The weather was beautiful and the turn out of showplanes was tremendous. The fly-in was already going full blast, even though Friday is technically an "arrival day." Ken was already talking to admirers of his Stinson even as he was getting his tie-down ropes out of the baggage compartment, and it continued right up to the

time we were stowing them again on Sunday in preparation for the flight back south to the Corona, CA airport where the airplane is based. Such attention keeps Ken from seeing as much of the fly-ins he would like, but, then, that's part of the fun of having a showplane.

Merced annually hosts one of the largest turnouts of vintage airplanes you'll see anywhere, and the variety of types is almost bewildering. On Saturday night, the Mayor's Trophy, the top award of the meet, went to one of the smallest factory built airplanes on the airport . . . a 1935 Aeronca C-3. The owner is Roy Moore of Santa Paula, CA, whose Davis D-1W was featured on these pages in our Fall 1985 issue. Steve Pfister, whose Serial Number 1 Staggerwing project



Morton Lester's (Martinsville, VA) Lycoming O-320 powered Monocoupe, named the Best Custom Antique at Burlington '89.

Morton Lester



Bill Scott's (Kernersville, NC) newly restored Bellanca 14-13-2 Cruisair. This is the way they looked when they came from the factory in 1946.





Roy Moore

ROY MOORE'S GRAND CHAMPION AERONCA C-3

has also appeared here in **Sportsman Pilot**, also had a hand in restoration of the C-3, as you will see.

What's known about the airplane today begins with Steve, as a matter of fact. He had been looking for a C-3 and had heard about one that had been hung up in a hangar at the Compton, CA airport sometime in 1949. It had not been in an accident, it had just been taken apart for recover. For reasons no one recalls today, the work never started and the parts and pieces simply collected dust for over 30 years. When Steve learned of its existence, it was owned by a fellow named Jim Wood. It was not for sale at the time, but Steve kept calling periodically in case Jim changed his mind. He never did . . . but after his death a few years later, Steve got a call from his widow asking if he were still interested in the airplane. He was . . . and soon had it in his hangar at Santa Paula. By this time, however, he had already purchased another C-3 Master and was flying it, so very little was done toward restoring the "new" one.

Unfortunately, Steve had some health problems last year and needed to sell the disassembled Aeronca. He feels fortunate that Roy Moore bought it and kept it at Santa Paula. In fact, Roy engaged Steve to build new wings for it. All the woodwork in the airplane was replaced . . . the wings, the fu-

selage formers and stringers. Lou Boice of Santa Paula, who had covered Roy's Davis, did the honors on this airplane also. As before, Roy specified Grade A cotton and dope and, of course, the original bright yellow color and simple trim scheme. One of the most expensive items involved in the restoration was the replacement of all the streamlined wires that brace the wings, top and bottom, and the tail surfaces. It's what holds the thing together, however, so Roy accepted that hit to his wallet as absolutely necessary.

Roy was quite proud of the tall, skinny 24 x 4 wire wheels he found to use on his prize winning Davis, feeling they were key to retaining the "period" look of the airplane. Likewise, he wanted to use the little "streamlined" balloon tires that were available for use on C-3s in 1935. No one makes them today, of course, but by chance a tailwheel tire of almost the same dimension and oval profile shape is still available. Roy bought a couple of them and old timers tell him they look exactly like the originals. As in 1935, they appear almost too small, giving the airplane the "toy" look that endeared it to everyone who ever saw a C-3. 1935 was the year Aeronca rounded out the C-3's fuselage, changing it from an open cockpit "Razorback" to an enclosed cabin "Roundback". A cabin heater and brakes were offered that year, and Roy's Aeronca has the



brakes. He says it is surprising to him that anyone bought that option because the price was around \$100 Depression dollars, a lot of money at the time.

The engine proved to be the sink hole for dollars on this project. A 2-cylinder, 36 hp Aeronca E-113B, it was sent out for overhaul, but froze up on the very first flight. Reworked, it quit on the second flight due to some loose gasket material plugging up the scavenge pump, dumping out all the oil. Steve was flying the C-3 at the time and managed to nurse it back to the airport . . . which was fortunate for both pilot and aircraft because there aren't a lot of places suitable

for a forced landing around Santa Paula. This time the engine was turned over to some fellows in Santa Paula . . . who found the cylinder bores were off center and anything but straight, among other things. New cylinders had to be found and new rings were installed, but it was worth it because the engine has been running perfectly since this last rebuild. At Merced Roy noted that the engine was blowing a little oil out the breather, but he felt it was due to over filling rather than blowby in the cylinders.

The little Aeronca was flying and could have been at Merced last year, had the engine problems not developed. It was ready this year, however, and Roy's son was scheduled to fly it there. A corporate pilot, he had a last minute flight come up, however, so Steve Pfister got the nod.

"What a kick!" Steve says of flying the C-3. "It's slow, but I can outrun any 65 horse Cub around. I proved that here at Merced. I was out in the dawn patrol yesterday and there was a Cub in the fly-by pattern with me. I came up on his side, throttled back and flew with him for a minute, then just accelerated away from him. That was kinda fun. The climb rate is . . . well, actually, it's pretty awful. About 400 feet per minute, I guess. Out here in California, in our heat and with the mountains we have, it helps quite a bit if you have some sailplane experience when you try to fly it cross country. Here in the San Joaquin Valley, it's flat and you rarely have to go over 1,000 feet, but when we fly it back to Santa Paula, we'll have to get over the Gorman Pass. From here, it will be about 2:00 in the afternoon when we get there and it will be kinda warm and it won't perform very well. To get over, you have to run up and down parallel to the ridge and hope there is enough air moving up the side to boost you over. This kind of ridge soaring, flying the airplane instead of the engine, is what makes it fun to fly the Aeronca. You

don't just push the throttle in and go. There's a challenge involved in getting this funny little airplane to and from the show!

"The C-3 has a good, solid airframe and the engine is so dirt simple there's really not a whole lot to go wrong . . . if it is right to start with. The way we baby our antiques today, there's no reason why we shouldn't get 400 to 600 hours before the engine needs a major. Modern oil is a big help and we are real good about putting Marvel Mystery Oil in the fuel, plus a squirt of it on the valve springs before we fly. We grease the rockers regularly, also . . . but otherwise, you just put gas in it and go flying. We've had a lot of people tell us that if we run the engine an extra 300 rpm it'll really go, or if we reindex the prop, it will do all these wonderful things . . . but I don't think that's what it's all about. The cuteness is that little engine in this little airplane. If we had wanted more speed and power, we'd have put a 65 Continental in it. We like it just as it is."

Both Roy and Steve expressed amazement at the number of people they met at Merced who had learned to fly in a C-3. In almost every instance the story was the same: the Aeronca C-2/3 was the only affordable trainer in the early dark years of the Depression, due to its low cost per hour of operation. They were also surprised at the number of airline pilot careers launched by the C-3. There is a message in that, I think. Despite the huge increases in gasoline prices since the early 1970s, no one in the U. S. has seen fit to build a trainer that burns significantly less fuel per hour. In Europe where fuel prices have always been high, motorgliders that burn just 2 or 3 gallons per hour are used for primary flight instruction and rental to soloed pilots. Here, however, our manufacturers want their trainers to fill as many roles as possible . . . so we are stuck with four place airplanes with 150/160 h. p. engines that burn nearly 10 gph grind-

ing around the traffic pattern shooting touch and goes.

What we need is a latter day rethinking of the C-3 concept.

THIS . . . IS A STITS PLAYBOY?

We may have a new movement starting within the ranks of homebuilding . . . a move backwards! Increasingly, we are seeing homebuilts originally constructed in the 1950s and 1960s . . . even some from the 70s . . . being restored and put back on the fly-in circuit. Most are tube and rag designs which, like the Cubs, Champs and such, seem to be capable of going on forever. Nostalgia is certainly a factor in this revival of old homebuilts, but cost is another. Golden Oldies, more often than not with just a few hundred hours of flying time and little deterioration other than run out fabric, apparently can be had for very low prices . . . and needing just a clean-up and a cover job, can be put back in the air for a lot less than just the cost of many of the kits available today. Of course, these 1950s and 1960s designs aren't going to go 200 mph and range out 1,200 miles . . . but if just flying around your local area suits your needs, maybe you ought to start snooping around in the rafters at the airports in your area for a bargain.

So says Herbie Gehlken of Redding, California and his partner, Jack Day.

You know Herbie . . . he was the builder of the beautiful Sidewinder that was named Grand Champion Plans Built homebuilt at Oshkosh last summer. Herbie likes challenges . . . he **thrives** on challenges . . . and when he noticed parts of a rather forlorn looking Stits Playboy in the back of a hangar at his home airport, he investigated and found it was for sale. You can almost hear





him thinking to himself: "O. K., I've won the highest award a homebuilder can win, Grand Champion at Oshkosh. What can I do for an encore? What can I find that would be a challenge to me now? What about this Playboy? What if I took something like this and turned it into something so appealing people would be as impressed with it as with my Sidewinder . . . now **that** would be a challenge!"

As improbable as it seems, that is exactly what he and Jack Day have done, with IA Mike Pennington taken in as a partner to look over their shoulders and approve all their work just as if they were restoring a certified airplane. Beginning in October of last year, they set to work stripping the airframe down to bare wood and metal . . . and by May 16 they were ready to fly it! The Playboy had been built in the early 1960s by John Dalton of Greeley, CO and as they removed the fabric from all the various components, it quickly came evident just what a fine craftsman he was. Everything had been done to the finest of aircraft standards and the work had endured the ravages of time exceedingly well. The only damage or deterioration was in some ribs at the wing roots where the fabric had distorted them over time as the dope finish continued to shrink.

The engine was a Lycoming O-290G, an ex-military portable generator powerplant with just 383 hours since the conversion, which included an aircraft crank and accessory case, dual mags and aircraft valves and pushrods. Herbie and Jack assumed they would have to rebuild the engine due to the length of time it had been inactive, however that was not to be the case. On the advice of Lycoming, they pulled the valve covers and borescoped the cylinders to check for rust, and finding none, they changed the oil, pulled the prop through 20 or 30 times to lubricate the shaft . . . and cranked it up. It ran fine and had no oil leaks, so the decision was made to use it as it was. New plugs were installed and the mags were overhauled, just to be on the safe side, but no other work seemed necessary. A number of hours of ground running was done before the airplane was flown, then a compression check was done as the final precaution. The result? 78 over 80 on three cylinders and 76 over 80 on the fourth. Not bad for an engine

that had been sitting for 12 years. There weren't even any leaks in the gas tank!

The fun part for the partners was the cover job. Neither Herbie nor Jack had ever done fabric work, so a new challenge awaited them. According to Herbie, "We had no preconceived ideas concerning covering, so we just bought Ray Stiits' materials and instruction book and followed it page, by page. It became a family project . . . we brought sandwiches and stuff and everybody got into the act. Except for the tapes, we had the fuselage covered in one Saturday. Ray came by to see the airplane here at Merced and he didn't throw eggs at it, so I guess we did O. K."

Black and white photos can't do the Playboy's paint job justice, but even they provide an indication that their work was more than just beginner's luck. Based on a Christen Eagle trim scheme, but containing even more "feathers" and more different colors, it had to have been a nightmare to tape . . . and tape . . . and tape. The airplane is basically black, so all the brightly colored "feathers" seem to jump out at you, especially when sitting in bright sunlight.

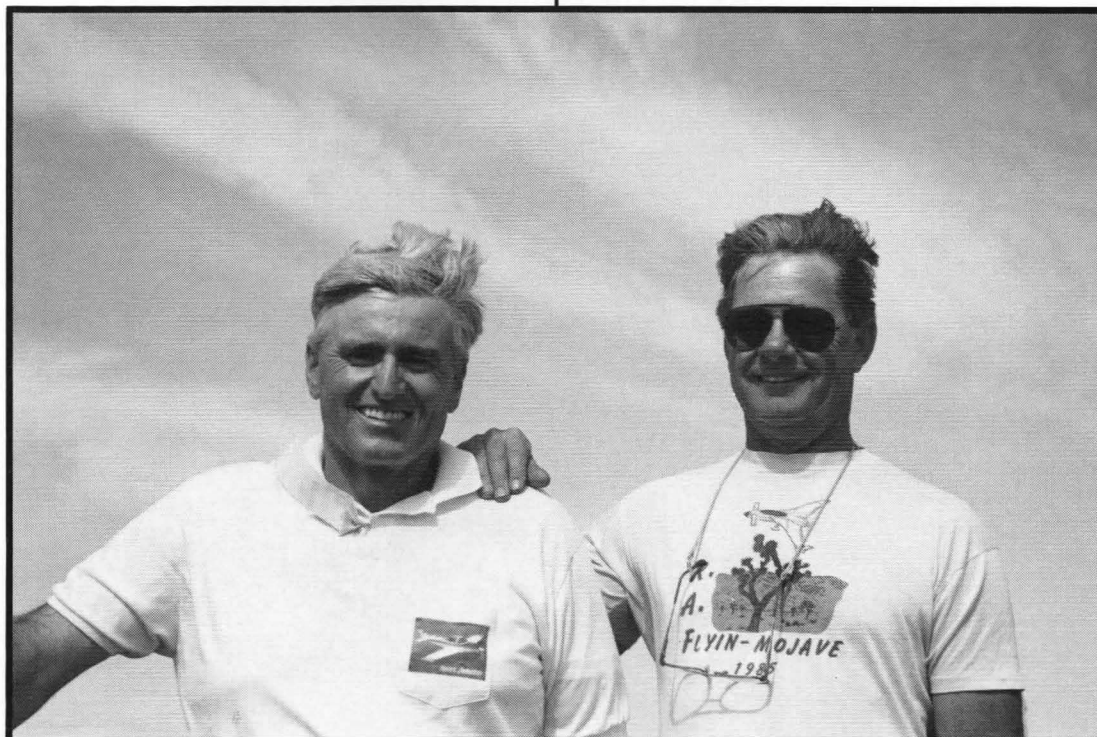
The rest of the airframe got the usual "Her-

bie Treatment" . . . and you know what that means if you have seen his Sidewinder. Every piece of exposed metal that is not painted is polished, so that as you walk around the airplane, it sparkles and glitters like a faceted diamond . . . or like the show cars Herbie used to build. That was why EAAers at Merced would walk up to the airplane, circle it a time or two, cock their heads quizzically and exclaim, "**This** . . . is a Stiits Playboy?"

There was more to the project than sparkle and glitter, however. The trio kept very careful financial records throughout the restoration, and the total cost up to the day it landed at Merced . . . two weeks after the first flight . . . was \$4,960! That included California sales tax, property tax . . . everything. This is why Herbie and Jack think all of you should be scouring the country for old homebuilts to restore. It is also why they are flying the Playboy to Oshkosh this summer. They want to participate in the gathering of Stiits designs being organized by Don Mildebrandt of Milwaukee, and they want to instill some pride in the owners of the older homebuilts. Both say that all weekend at Merced, people kept coming up saying they owned a Playboy or some other 1950s or 1960s homebuilt design but didn't bring them to fly-ins any more because they thought no one was interested in them today. They were thrilled to see what had been done to jazz up the Playboy and were going home to take a second look at their own birds. The fact that a Grand Champion builder had been a part of this project . . . and was so enthusiastic about it . . . was a special boost to their self esteem.

The biggest deal of all for Herbie and Jack (their third partner, Mike Pennington, had not yet flown the Playboy as of the Merced weekend) was the performance of the little single place sportplane. As owners of high performance cruiser type homebuilts, they were only interested in local flying in the Playboy, so they equipped it with a climb prop. And, boy, does it climb, they say, not only in rate, but more spectacularly, in angle. Their Sidewinder and Long-EZ climb at relatively shallow angles, but with its high lift

Herbie Gehlken and Jack Day



wing, the Playboy goes up like the proverbial homesick angel, they say. It gets off in about 300 feet and has been clocked to 6,500 feet in less than three minutes. Ray Stits told them they could get about 140 mph indicated with a cruise prop, but they aren't interested. They **love** blasting out like a rocket, and they want to take the Playboy into all the little private strips in their area that are too short for their high performance airplanes.

The Stits Playboy has an important place in the history of the modern era of homebuilding . . . and EAA. It came along about the time EAA was founded in 1953 and was one of the first of that and the next decade to be marketed as a complete plans and materials package. That concept was not new . . . Ed Heath and others were doing it well before 1920 . . . but Ray Stits was one of the first and certainly one of the most successful in reviving the practice after World War II. It was not easy, either. In a conversation with Ray at Merced, he pointed out that in the early 1950s the Korean War had put a damper on general aviation and all those tens of thousands of Cubs, Champs and such produced in the 1940s were selling at give-away prices . . . like \$300 and \$400 apiece in most of the country! It was tough to build an airplane cheaper than you could buy a good, low time used one, so you had to be pretty daring to put a homebuilt on the market at the time. Ray knew airplane people, however, and he knew that there were those who wanted more performance than the puddle jumpers afforded . . . and more economy than the higher performance factory jobs offered. And, he knew, there were those who simply loved to build. That was the niche he filled in the 1950s and 1960s . . . until his fabric business became so successful he had to drop his other lines and pursue it exclusively.



Ray Stits

Ray Stits has been a major figure in the world of sport aviation ever since the end of World War II . . . in the air show business with his series of "world's smallest airplanes"; as the designer of a series of homebuilts (did you know he also certified a design?); as one of the major suppliers of aircraft building supplies and, of course, the major force in the aviation covering business for the last 25 years or so. It was Ray Stits who contacted EAA President Paul Poberezny and suggested the formation of local chapters . . . and formed the first one in the Riverside, CA area. Ray has been successful because he has always worked hard and kept closely in touch with his customers. Go

to a fly-in like Merced and you will see him and his wife, Edith, out on the showline looking at airplanes and talking to their owners . . . and at the major EAA events like Sun 'n Fun and Oshkosh, he spends the entire week in a workshop teaching people how to properly apply his fabric.

Ray's prototype Playboy still exists and is on display in the EAA Museum, along with several of his other designs . . . most notably his tiny Sky Baby, which is one of the most popular exhibits in the beautiful new facility.

It may come as a surprise to many, but one of today's most popular homebuilt designs is a direct descendent of the Stits Playboy. Did you know that Dick VanGrunsven started out with a Playboy, designed a metal cantilever wing for it and, ultimately a metal fuselage . . . and from that, designed the RV-3? Dick was one of the many who stopped by to admire the Gehlken/Day/Pennington Playboy and was generous in his acknowledgement of Ray Stits' little design as the starting point of his very popular RV series of sportplanes. "Ray had a good idea . . . a sportplane with good performance, including aerobatic capability, yet with good short field capability . . . and I've just continued to improve and expand upon it over the years. I still use the same size wing, the same airfoil, the same chord width." It is interesting to recall that after the Playboy plans were out for a while, Ray's customers began asking for a two-place version . . . and preferably with side-by-side seating. Ray responded with the Playmate, which ultimately evolved into a tri-gear, folding wing version. And what has Dick VanGrunsven come to today . . . the side-by-side RV-6 and tri-gear RV-6A. Good ideas never go out of style, do they? There were, incidentally, more RV-3s, RV-4s and RV-6s at Merced than any other type of homebuilt.



The new 3-surface Discovery on display at Merced '89. Designed by Martin Hollmann, it is being marketed as a kit by Progress Aero R&D, 813 Airport Rd., Monterey, CA 93940 (phone: 408/372-6093). A 2-place, side-by-side machine, the Discovery is of molded composite construction similar to the Lancair. Span is 30 ft., length is 17.92 ft. Empty weight is 1,040 pounds with a Lycoming O-235 and a fixed propeller. Gross is 1,680. Top speed is 190 mph, cruise is 170. Stalls at 70. Cabin width is 43 inches.



MALONE, HATHAWAY ***CULVERS***

For several years I watched a pair of Culver Cadets fly into the pattern together at the Merced, CA Fly-In, land in formation and taxi to their parking spots . . . still just a few feet apart. Unfortunately, the pilots didn't spend a lot of time around their airplanes, so usually the next time I saw them, they were taxiing out for take-off . . . in formation, as always. Finally, I met one of them at Merced . . . Bob Hathaway of Hollywood, CA . . . but the other remained elusive. Just loved to roam around looking at all the airplanes, Bob told me.

In March of 1988, I managed to catch both of them at the Cactus Fly-In at Casa Grande, AZ . . . and met the other pilot, Chuck Malone of Ventura, CA. Both Bob and Chuck, I found, were recent retirees from Walt Disney Productions and had very interesting backgrounds. I interviewed both of them for an article here in **Sportsman Pilot** . . . but had fate step into the picture before I could get it in print. On December 10, 1988 Chuck died of cancer at his home in Ventura.

That's not the end of the story, however. Chuck's son, Mark Malone, is also a pilot and has taken up right where his father left off. This year at Merced, the two little Culvers came zipping in . . . in formation just like they always did . . . and I was able to meet Mark for the first time. So unique is the story that I have decided to print my 1988 interview with Chuck in his memory, and continue with my 1989 interview with his son . . . plus, of course, my piece on Bob Hathaway.

CHUCK MALONE ***. . . IN MEMORIAM***

I sincerely regret my association with Chuck Malone was limited to one afternoon at Casa Grande. We hit it off immediately simply because both of us were rotten to the core airplane nuts, and our kind always get along famously. We also shared a love of the Culver Cadet and I think Chuck felt anyone so inclined couldn't be all bad, even if he did make his living pecking out words on a computer.

Chuck, I learned, was born and grew up in Muskogee, Oklahoma. He majored in aeronautical engineering at Oklahoma A&M and began flying there in 1938. When the CPTP program began, he signed up and flew for a time at Eastern Oregon State College at La Grande . . . where the operator of the program owned one of the spectacular new Culver Cadets. Chuck decided then and there that at some point in his aviation career he wanted to own a Cadet.

He was furthering his studies at the Boeing School of Aeronautics in Oakland when World War II began, and, shortly, moved to Burbank and went to work for Lockheed. In 1944, he entered the Air Force and was assigned to the training command, flying almost everything in the inventory, but mostly B-25s.

After the war, he returned to Burbank and

managed an auto transport business for a time. Unable to stay away from flying, he was one of the founders of the Sky Roamers Flying Club, which became the world's largest non-profit flying club and was in operation for 33 years. By 1950, it was so successful that Chuck was able to assume management on a full-time basis and proceeded to take on first a Cessna and later a Beech dealership. He moved the operation into Hangar 1 at the Burbank Airport when United Airlines moved out and ultimately saw a membership approaching 350 and the club's fleet grow to well over 50 airplanes.

In the course of his operation of the Sky Roamers Flying Club, Chuck became a flight examiner and issued some 560 ratings in everything up to 20,500 pounds gross weight. He also oversaw the installation of a simulator that was used to train Flying Tiger (the airline) pilots. In all, he flew over 150 different makes and models of airplanes, 43 of them from the Beech line alone.

During his years with the Sky Roamers, Chuck did a lot of charter flying, and one of his clients was Walt Disney. After a couple of years, Disney decided he wanted to start his own flight department and asked Chuck to become his personal pilot . . . which he agreed to do. They started out with the first Model 88 Queen Air on the West Coast, moved up to the King Air and still later, to a Gulfstream G-1. The 17th G-2 was on order when Disney died. By this time, Chuck's title was Chief Pilot of Walt Disney Productions.

When he retired in 1984, he had logged almost 26,500 hours of flying time. In his 20 plus years with Disney, he flew executives, movie stars, astronauts and politicians, including Richard Nixon and Ronald Reagan.

About the time Chuck retired, he had an opportunity to go for a ride with fellow Disney employee Bob Hathaway in his Culver Cadet. It was love at first flight . . . a resurgence of the desire he had experienced so long ago in La Grande, OR to own a Cadet. "How do I get one of these?" was his first question when they landed . . . and he was sincere in asking for assistance. He had always dealt with new aircraft . . . available aircraft . . . and he had no idea at the time how he would go about obtaining an airplane that had been out of production for over 40 years. Bob spent some time detailing the arcane business transactions common to the world of vintage airplane enthusiasts and collectors, and pointed Chuck in the direction of some Cadets that were reported to be for sale. After the usual frustrations, he finally located a 1941 LFA Cadet, NC37803, Serial Number 313, in Farmington, NM.

This airplane had been taken in on trade on a new Bellanca Cruisair sometime after World War II by an FBO in McCamey, TX . . . and was simply pushed into the back of a hangar and allowed to collect dust for the next 28 years! It was eventually purchased by Doug Rhinehart and brought to Farmington for restoration. One wingtip had been rebuilt and the airframe recovered when Doug tragically died in a flying accident. The Cadet was then sold to Bob Lunsford of Farmington, was taken apart and stored in various places around town: the wings were left in the Rhinehart hangar, the fuselage in Lunsford's shop and the engine . . . "in a million pieces", according to Chuck . . . in his garage. That was the situation when Chuck and his son Mark arrived in Farmington and bought the "remains."

Once home in Ventura, where he and his family had moved following his retirement, Chuck plunged into the restoration project with the same enthusiasm that had driven him in all his previous aviation endeavors. He worked up to 10 hours every day of the next 8 months on the Culver, rebuilding and updating it. Although the wings had been recovered by the Rhineharts, rats had subsequently eaten away most of the waxed rib stitching cord, so that had to be replaced. The wood inside the wings looked very good, so no further work on them was required. The smaller components and systems took up the most time. A new nose bowl and lower cowl had to be made and new Cleveland 5:00 x 5 wheels and brakes were fitted. This put more weight on the ends of the landing gear legs, which meant more strain was put on the manual retraction system. To gain more leverage, Chuck increased the diameter of the little retraction wheel to 12 inches, which was as much as the available space would permit.

The Cadet had an 80 h.p. Franklin in it when Chuck bought it, but during the restoration, a 90 Franklin was advertised in **Trade-A-Plane**. It was purchased, overhauled and installed in NC37803. The 80 Franklin was also overhauled and was retained as a back-up to the 90.

A lot of work was done in the cabin. The seats were recontoured to Chuck's liking,

new upholstery was installed and an avionics package was squeezed in . . . which was not easy because of the location of the fuel tank ahead of the instrument panel. It ended up mounted on the floor just ahead of the gear retraction wheel and included a 720 NAV/COM and a transponder. When I talked to Chuck in March of 1988, he had not yet installed an encoder, but planned to add one sometime that summer.

The Culver was completed and flown on November 11 of 1984 and Chuck had the immense pleasure of realizing the dream of his youth for the next four years. He and Bob Hathaway became flying mates, zipping around to all the big West Coast fly-ins, like two little fighter planes in tight formation. Bob's Cadet is also powered with a 90 Franklin, but is set up for high cruise with a propeller with 56 inches of pitch. Chuck chose to run 54 inches of pitch and thus was able to climb faster than Bob, but burned more fuel at cruise by virtue of turning 100-150 more rpm at a given airspeed. Chuck's Cadet would cruise at about 130 mph indicated, truing out at 132 mph at 7,500 feet.

The experience of restoring the Cadet had also been a great source of pleasure for him, so after the Culver was flying, Chuck moved on to rebuilding an Aeronca Champion, a 250 Comanche and, with a friend, a Beech Baron. The latter was completed just shortly before his death last December.

Chuck had been having an up and down battle with cancer and, finally, even the great fighting spirit that sustained him for so long wasn't enough to ward off the disease. He was laid to rest in the Valhalla Memorial Park located off the end of Runway 15 at the Burbank Airport . . . and a memorial service was held by his aviation friends at his hangar at the Camarillo, CA airport, where he based the Cadet.

Chuck Malone had been blessed with a life in which he was able to totally immerse himself in something he dearly loved to do . . . and though sadly cut short, such a life must be viewed in retrospect in terms of accomplishment rather than in mere years . . . and his accomplishments were great, indeed.



CHUCK MALONE . . . IN MEMORIAM

MARK MALONE ... THE DREAM LIVES ON

Chuck's beloved Cadet flies on today . . . just as he wanted it to. His son, Mark, now sits off Bob Hathaway's wing as the two of them climb up out of the Camarillo/Santa Paula area and head off to distant fly-ins.

For Mark, this carrying on of a family tradition is as natural as breathing in and breathing out. He does not actually remember a time when he was not flying. His father had him handling the controls of an airplane before he was tall enough to see outside . . . he "flew" the little airplane in the artificial horizon. His father taught his mother to fly, and Mark recalls flights when he and his mother occupied the front seats while Chuck sat in the back good naturedly kibitzing their every move. Later, when Chuck went to work for Walt Disney, Mark would often go along on trips and get to fly from the right seat on deadhead legs.

By the time he was old enough to begin formal instruction, Mark probably had 300 hours of flying time, so he was able to ease through the introductory hours without the usual acclimation to a new dimension most students must experience. He became a member of the Lockheed Air Explorers Scout group at Burbank and went through a Private pilot's course there. Soloing at 16 in a Cessna 150, he earned his Private ticket the following year. Upon graduation from high school in 1973, Mark looked around a bit and decided the market for flying jobs for low time pilots such as himself were somewhere between slim and nonexistent. He headed off for college instead, ultimately graduating from Pepperdine University with a degree in journalism. Photo journalism was actually his field, and while he was still in school, he was able to work part time as the team photo-



Mark Malone

grapher of the Los Angeles Dodgers . . . and had the thrill of going to the World Series with them in 1974, '77 and '78.

Mark never lost his interest in flying, however, and continued to fly with his father and on his own when he could. Through a friend, Herb Green, who was flying for KMPC Air Watch at the time, he got to fly the station's Baron and Bell Jet Ranger . . . and was so inspired by this experience that he dug in his heels and went to work obtaining his Commercial license and the various multiengine and instrument ratings he knew he would need to get a flying job. His father let him accompany him to a Flight Safety school to qualify as a co-pilot in the Gulfstream 1, and, afterwards, became an occasional right seater on Disney flights. Eventually, he signed on with a Houston gas company as a Gulfstream 1 co-pilot and flew for them for

the next 3 years. While with that firm, he also flew the Gulfstream 2, a Hawker Siddeley jet and a Citation.

After his father's retirement, Mark moved back to California and took over his job as the pilot for Walt Disney's Gulfstream. After 3 years, however, that airplane was moved to Florida, and not wanting to leave California, he changed jobs and went to work for 20th. Century Fox. He initially flew the Hawker 700, but now flies a Gulfstream 2 . . . travelling worldwide.

Along the way, he talked his father into buying a Beech Travel Air a family friend had purchased new, and did a lot of flying in that little twin . . . including the trip to Farmington to buy the Culver Cadet. Despite his experience in heavy corporate aircraft, Mark had no taildragger experience when his father finished and began flying the Cadet . . . and

began checking him out. He did not encounter a great deal of trouble in the Culver, but says that he found the Champ his father later restored to be the most difficult airplane to master he has ever flown.

Chuck Malone got to fly his Culver a little over 200 hours before his death, and at Merced this spring, Mark had just logged his 100th. hour in it. Like his father, he loves the little speedster . . . and was planning to fly it to Oshkosh and the AAA Fly-In at Bartlesville this summer.

Indeed, the dream continues.

BOB HATHAWAY

Bob Hathaway grew up in Moorestown, NJ (Philadelphia area) and soloed a J-3 Cub at Atlantic City in 1940. He had just entered college when World War II began and he immediately signed up for the Air Corps' aviation cadet program. Kent State University's CPTP program was his first stop on the long and arduous trail of training, then it was on to San Antonio for primary in PT-19s and Sherman, TX for basic in BT-13s. Already looking to a career with the airlines after the war, Bob wanted to get into 4-engine aircraft, so he expressed a preference for multi-engine training at the advanced level. He got that wish and flew AT-10s at Ellington Field. After earning his wings and a commission, however, he ran into a roadblock he hadn't anticipated: at the base where he was awaiting assignment, multi-engine pilots were being divided up according to weight. Those 150 pounds and over were being assigned to 4-engine aircraft and those under were being sent to fly twins. Bob weighed just under 150 and recalls with a chuckle that he simply couldn't drink enough water and eat enough bananas prior to the weigh-in to make cut for the heavies.



Stuck with the twins, he soon found himself in Del Rio transitioning into the Martin B-26 Marauder. When he was assigned an airplane and a crew, Bob was its youngest member . . . prompting his navigator/bombardier, who was all of 25, to complain about having to fly with a "bunch of kids."

Flying with the 9th Air Force, Bob was credited with 50 combat missions over Europe in the B-26 and ended up flying the lead airplane in many of them. "We had some hairy experiences, but my crew and I always got back," Bob recalls. "We had things shot out, but we never got hurt."

At the war's end, Bob's return to the states was delayed enough that his hopes for an airline career were pretty well shattered before he could get applications mailed. So many others were ahead of him by that time, that he didn't stand a chance. He spent some time in Frederick, OK still flying B-26s, but was finally mustered out of the service . . . and re-enrolled in college. A year later, however, he received a wire from the Air Force offering him the chance to go back on active duty ferrying B-26s and Douglas A-26 Invaders between bases out west. Missing the excitement of flying, he easily succumbed to the call, and soon was busily and happily ferrying A-26s from Hobbs, NM to Ogden, UT . . . about a 100 of them before the program ended. He was based at Kelly Field, in Texas and the only way to get home on weekends was in a P-51 . . . so, after a check out in a T-6, he became a weekend Mustang pilot.

In 1948, Bob was transferred to the Air Materiel Command and flew C-47s all over the Southeastern U. S. for a time. He had a lot of great experiences on that tour, but eventually felt the urge to move on to greater challenges. Helicopters were the new thing at the time, so he applied for training in them.

"Everybody thought I was crazy . . . and, as a matter of fact, they wouldn't let me go. I wound up in charge of a replacement depot in Rome, NY and one day a letter came through ordering me to send two pilots to helicopter training . . . so I sent myself."

After learning to fly choppers, Bob was assigned to Eglin Field Air Proving Command in Florida as a helicopter test pilot . . . but was only there for six months before the Berlin blockade began. He was quickly sent to Great Falls, MT for training in the C-54 . . . 4-engines, at last . . . and soon was in West Germany flying the Berlin Airlift. He flew those dramatic supply missions right to the end, and flew his C-54 back across the Atlantic to the U. S. Years later he would learn that he and fellow Santa Paula antiquer, Perry Schreffler, were in the same squadron during the Airlift, but they never met at the time.

Back in the States, Bob found himself getting caught up in the build-up for the Korean War . . . in a rather unusual way. Following World War II, the Air Force had allowed its motion picture service to dwindle down to just a handful of personnel, but needed to get it cranked up again for the Korean "Police Action." Sound recording had been a hobby of Bob's since his high school days, and some sharp-eyed personnel clerk had spotted a notation to that affect on his records . . . so the next thing he knew he was being sent through the Department of Agriculture's motion picture branch where he learned motion picture sound recording from some old-timers who really knew their business. Once out of training, Bob was placed in charge of the Pentagon's motion picture recording studio, which was set up in the National Archives Building in Washington for a time.

"That was a fascinating experience," Bob recalls, "because I was responsible for all sorts of old recordings . . . of people like William Jennings Bryan . . . people I didn't even know lived during the recording age."

Eventually, Bob's multiplicity of specialties caught up with him, however. He was the Air Force's only motion picture sound officer at the time and one of the few Air Force helicopter pilots. A regulation came out requiring officers to perform in their critical specialties at least 6 months out of every year . . . which in real world terms meant he was about to end up in Korea flying helicopters.



"In the early 1950s helicopters were such that you could knock them down with an apple. I didn't think they were yet suitable for combat, so I decided that if I wanted to live to a ripe old age, I should stick to motion picture work."

At the Air Force photo center in Orlando, FL at the time of this decision, he was separated from the service for good there . . . and ended up in Hollywood working for Walt Disney. Ultimately, he would be the head of the company's sound department.

A few years later, Bob and his wife decided





Bob Hathaway

they would buy an airplane and began looking for a Swift, which was their initial preference. Walking through a hangar at the Van Nuys, CA airport, they spotted something else that struck their fancy . . . a little Culver Cadet that was sitting level with its tailwheel up on an oil barrel. At first their reaction was one of amusement. "That's just a toy," they exclaimed. "It's so small!" For some reason, though, they kept coming back to look at the Cadet. They were driving a Porsche 356B at the time, and after sitting in the Culver, they realized it wasn't significantly smaller than their car. The airplane was owned by a Lockheed vice president named Willis Hawkins, who also owned a Cessna Airmaster. He had been appointed as Assistant Secretary of the Army and wanted to sell one of his airplanes before he left for Washington.

Bob bought the Cadet from Hawkins for \$2,500 on a Saturday, and the following Sunday, he and his wife climbed in it and took off for Florida! On that same trip, they flew north to New Jersey, landing at the Flying W Ranch. As the prop flickered to a stop, a red carpet came rolling right up to the wing and an emissary stood waiting to help the lady

out and escort her to the bar for a cool drink . . . an emissary they learned was none other than Frank Kingston Smith, the attorney/aviation journalist. The red carpet treatment was a famous feature of the Flying W Ranch and a lot of the pilots who based their airplanes there regularly took part in the welcoming just to see the looks on the faces of visiting pilots and their passengers.

Once back home in California, Bob kept the airplane tied down at Van Nuys and recalls many windy nights when he drove 15 miles to the airport "to sit in the airplane and hold its hand while it flapped and battered around." The outside storage ultimately took its toll, nevertheless, and the fabric on the wings began to look ". . . like an old loose quilt," Bob recalls with a wince even today. To his surprise, he found that wood and fabric workers were in very short supply at Van Nuys and, eventually, he went to the local FAA office to see if anyone there knew where he could get the Cadet recovered. "Why don't you take it up to Rex and Mildred Wells at Santa Paula?" someone said, so he followed up on the suggestion. At the time, he had never heard of Santa Paula, but was soon on the road to find the little downtown airport that was to become an antiquer's

haven . . . and, eventually, the home base for his Cadet. The Wells were willing to recover the Culver, but told Bob their waiting list was at least 6 months long at the time. After about half that time, however, he got a card telling him to bring it to the shop. With a ferry permit in hand, Bob launched himself from Van Nuys, climbing out to clear the mountain ridges between there and Santa Paula and "scared myself to death looking out at the fabric billowing up between ribs." He made it . . . and the Wells tore off the old rag, replaced it with Ceconite and repainted the entire airplane. Before he could leave Santa Paula with the airplane, he had been recruited by Bud Gurney to become a member of the Angeles Antiquers. That was his first real exposure to sport aviation as a social as well as a flying activity. Previously, the Cadet had merely been his very personal magic carpet to far away places; now he could enjoy it in the company of others who also loved older airplanes. Bob recalls some wonderful outings with the Angeles Antiquers at Palm Desert, where they landed on a beautiful irrigated greensward with a fine hotel nearby. A golf course now, he laments the loss of such a rare grass strip in the desert that is Southern California, a strip on which his little Culver was so marvelously forgiving.

In 1984, he and his wife flew the Cadet to Oshkosh and went on to Washington to take in the National Air and Space Museum. As the trip progressed the engine seemed to gradually lose power . . . which Bob initially diagnosed as the deleterious effect of having to use 100LL in his 80 octane engine. The engine never threatened to quit, but just seemed to get progressively weaker in the climb. While at Oshkosh, he bought an old duffle bag and shipped their tent and sleeping bags back home to lighten the load, but even so, he had to resort to some soaring techniques to get over the hot desert on the way home. Apparently, the engine had slipped off timing somewhat, but in any case was soon running strongly again after some maintenance.

Bob's Cadet has some minor modifications, the most obvious of which is an extended fairing on the front of the vertical fin. The windows in the doors have been cut out a little higher on the top than normal and the wing lights have been mounted right out on the tips. Walt Marple, who maintains the airplane for Bob, once owned a Cadet on which he made similar modifications, and a friend, Stan Gates, made the same mods on his Culver. Stan later sold his airplane to Willis Hawkins, who, as we've seen, sold it to Bob. Aviation is such a small world!

As we've already related, it was Bob who reintroduced Chuck Malone to the Culver Cadet and got him started in the direction to finding his airplane in New Mexico. After Chuck began flying, Bob further introduced him to the wonderful society that is sport flying, EAA and AAA today . . . the society that brought so much pleasure to Chuck's final years.

Although he will never abandon his little Culver, Bob is about to spring a new vintage sportplane on the world. 20 years ago, he found and purchased a 1935 Waco CUC and stored it away as an after retirement project. He retired from Disney in 1986, has been hard at work on it ever since . . . and this should be the year it flies. ☺



DON FORTON'S **SKYBOLT**

Last summer at the Mid East Regional EAA Fly-In (MERFI) in Marion, OH, one of the truly outstanding homebuilts on display was a Skybolt built by Don Forton of Sterling Heights, Michigan.

It was Don's first project, but I found he was uniquely prepared to do a superb job of building on his first try. He works as an experimental technician at the General Motors Tech Center in Warren, MI . . . a member of a team that custom builds one of a kind cars for test work. As he tells it, "I went to the Shrine High School in Royal Oak, MI, and from there, I did some drafting for a few years. Next, I moved into tool and die work, and I guess I kinda didn't like having to do one thing all the time because when I had the opportunity to go to work at the GM Tech Center, I jumped at it. There we can custom fabricate, we can weld, we can paint, we can do whatever it takes to build a complete assembly. I'm not on a drafting board all day, I'm not just welding all day, I get to do a variety of things. It is a very interesting job. You get to work with wood, with steel, with fiberglass. You get a well rounded education, and it proved to be quite valuable when I decided to build an airplane."

Don began flying in 1969 . . . the old fashioned way. He earned it. He cut grass at an airport in the summer and plowed snow in the winter, earning about an hour's flying time per week. It took about a year doing it

this way, but he finally got his license. He soloed a Cessna 150 initially, then began getting time in Champs and a Luscombe. Introduced to basic aerobatics in the Luscombe, he says he has had little interest in straight and level flying since!

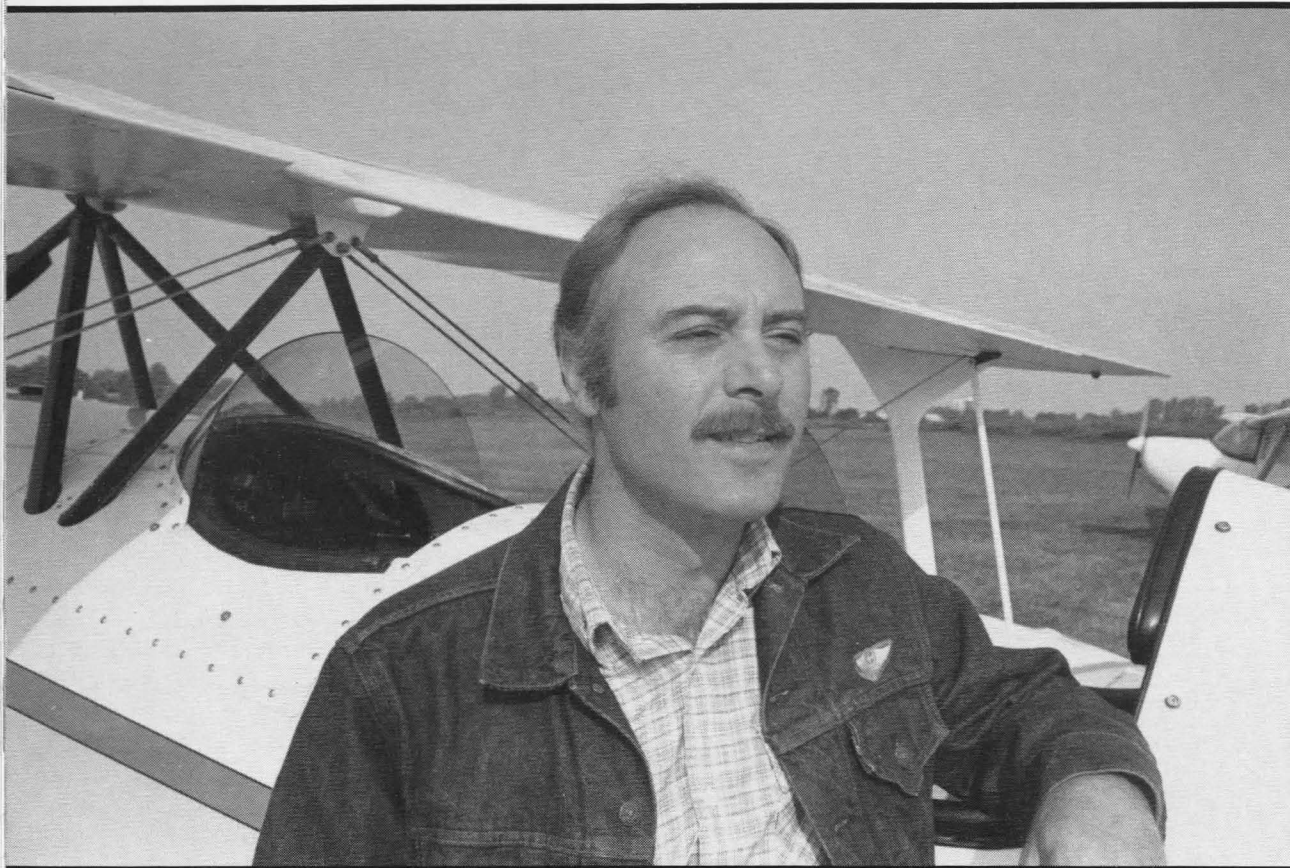
Don would have liked to have written a check for a factory Pitts at that point in his life, but they were well out of his price range. That left homebuilding, so he began studying the various designs available at the time . . . and ultimately decided to build a Skybolt. Designer Lamar Steen still owned the design then, so a check for a set of plans was soon winging in his direction . . . and another to Aircraft Spruce for some wood and 4130 tubing.

Don also bought some scrap tubing and began practicing his thin wall welding technique. He had an acetylene welder and had done some welding, including thin wall, but he figured he needed to do some additional practicing before building something upon which his physical well being would ultimately depend. Once he felt confident, he began welding up the tail feathers and worked progressively from the easiest components to the most difficult, which was the fuselage. The Skybolt is large enough that the fuselage was quite a project, with the seemingly endless task of cutting and fitting tubes. In the beginning, each was tack welded in place, and when what appeared

to be a complete fuselage stood before him, it was time to start at the front and work his way all the way back to the tailpost, finish welding every joint and cluster. Needless to say, he felt thoroughly checked out in aircraft welding by the time the job was done.

It took 4-1/2 years and a little over 5,000 hours of shop time to complete the airplane, so all this cutting, fitting and welding of 4130 tubing did not take place overnight . . . nor, in fact, did it progress straight through from start to finish. It may seem strange to those of you who live in the warm parts of the nation, but in the Frozen North, many builders have to sequence their work according to the season. Don did not have his garage heated when he began the project, so he worked on the welded tube structures there in the warm months, then shifted to his basement when the winter winds began to howl, building the wings there. For four years, the changing of the seasons in the Forton household was not signalled by the falling of leaves, the blooming of the first tulips and such . . . it was, rather, the spring filling of the welding tanks and the fall trips to purchase fresh glue.

Building the wings in his basement presented some special problems for Don. A single stairwell was his only access to his winter shop, and he had to be certain he could get the completed components out. The two lower wing panels were no sweat,



Don Forton

but the one-piece upper wing could well be mission impossible, he suspected. To find out, he made up a 2x4 frame in the exact dimensions of the wing and made a trial run. It was tight but doable, he found, so he began butchering spruce with abandon. Fortunately, after he had the wing about 80% completed . . . and without the tip bows . . . he decided to try easing it up the stairs, just to be absolutely certain he hadn't miscalculated . . . and discovered that had he already installed the tip bows, it wouldn't have made

it!

The problem then, of course, was just where he would finish the wing. His garage was not large enough . . . yet. Putting the airplane aside momentarily, Don poured a 10 by 22 foot concrete slab behind his garage, cut out the back wall . . . and in two days had a garage enough big enough to accommodate the wing. The covering and painting . . . Stits, start to finish . . . was done there, so the extension work really paid off. Don, incidentally, is still another satisfied

Stits customer. This was his first covering job, and by simply following Ray Stits' instruction manual to the letter, he came out with a beautiful job on his first try.

Knowing he was going to use the airplane almost exclusively for aerobatics, Don decided not to stint on the engine and prop. Consequently, he purchased a brand new Lycoming AEIO-360-A1A and a new Hartzell aerobatic constant speed propeller. A Christen inverted oil system and what he calls a super smoke system completed the package ahead of the firewall.

When the Skybolt was finally completed, it was found to weigh 1,170 pounds . . . distributed in such a manner that the center of gravity was well within the design envelope. Like so many other builders, Don had all but quit flying during the time he was laboring away in his garage and basement, but once he began to see light at the end of the tunnel, he headed back to the airport and began the process of getting himself current in taildraggers again. By May 9, 1981, both he and the Skybolt were ready . . . and he simply strapped in and blasted off. Everything went so well that the first flight lasted an hour and 5 minutes and included a check out of the inverted oil system and some loops, rolls and hammerheads. The airplane has worked flawlessly ever since, Don says, and now (last September) has 450 hours on the tach . . . some 400 hours of which are aerobatic time, he estimates.

"The airplane seldom goes up that it doesn't get looped and rolled. That's the reason I built it and it does them so nicely, I can't resist. I've been very happy with it from the very first day it flew. It cruises at about 143-145 mph if you run it at 25 squared, which is 75% power. I've tested it to 250 mph indicated and I've done about every maneuver it is capable of doing, including tail slides, torque rolls, lomcevak. It just does a great job."

Don has flown in IAC competitions, but most of his aerobatic work has been in airshows. He began working on his FAA aerobatic waivers in 1982 . . . at 1,000 feet . . . and had his ground up waiver by 1984. He flies 4 or 5 shows a year, mostly in his area, to keep his waiver current . . . and to keep himself current for the new airplane he is currently building. When we interviewed Don at MERFI last September, he had the Skybolt for sale, and it may well have a new owner by the time all of you are reading this.

The new airplane is also an aerobatic biplane, but it is Don's own design. To be called the Sundance, it is a "conglomeration of all of the features I like best on a number of biplanes," he says. Smaller than the Skybolt, the span is 20 feet. The fuselage is shorter, yet the cockpits . . . it's 2-place . . . will have more room and both will be covered by a canopy. It will be powered by a 330 hp Lycoming (his number), will have an aluminum leaf spring landing gear and the aileron slave struts will be enclosed in the interplane I-strut. It will have full span ailerons on both the top and bottom wings, interconnected with the elevator in such a manner that they will droop 7 degrees with full up elevator and reflex 7 degrees with full down elevator . . . which should be great for doing square corners! Well into construction, it should fly late this year or early in 1990.

We'll be watching for this one! ☺





BILL SPEYER'S **GLASAIR RG**

One of the newest aircraft at last September's MERFI Fly-In at Marion, OH was Bill Speyer's Glasair RG. Completed and flown for the first time the previous July 17, its FAA required 25 hour test time was completed just before the fly-in weekend rolled around. A stock Glasair RG with a full IFR panel, wingtip extensions and powered by a 160 hp Lycoming IO-320B1A and a Hartzell constant speed propeller, the airplane is a first time project that looks like it was built by a veteran.

Bill Speyer owns and operates a company, Color Systems, Inc. of Dayton, OH, that makes color separations for the printing industry. He soloed in a Cessna 120 in 1957 and has owned a number of airplanes over the intervening years . . . a Vagabond, an Erco, a Piper Clipper, an Aeronca Chief and a Tri-Pacer. Although his original motivation was to be able to fly himself when making his business rounds, Bill never bought an airplane for his company. He was a member of the Dayton Pilots Club, and it was simply more convenient and less expensive to use one of the group's 12 modern, well equipped aircraft for business flying than to try to equip his own sportplanes for seri-

ous IFR work. He had everything from a Cessna 152 to a Cherokee Six and a Mooney available for a nominal hourly fee. With a territory extending from Binghamton, NY to Indianapolis and from Cincinnati north to the South Bend/Elkhart, IN area, he built up time steadily and exercised his instrument rating regularly. Today, Bill has about 2,500 hours logged, all in single engine aircraft.

A few years ago, he decided he would like to build an airplane and initially settled on a KR-2. He enjoyed working on the airframe, but really did not care for the idea of using a VW based engine. Ultimately, he gave up the project and decided to really take the plunge and buy a complete Glasair RG kit. His was Serial Number 600 and arrived in his driveway one afternoon inside a shipping box 5 feet square and 25 feet long. Fortunately, it was the driver's last delivery of the day and he was willing to leave the trailer in Bill's driveway overnight to allow the box to be unloaded piece by piece. Otherwise, a hoist of some sort would have been necessary to get the big box out of the truck and into the Speyer garage.

Right from the beginning, Bill found the Glasair plans to be "a work of art", as he puts

it. "It's a step by step procedure and they don't miss a thing. They tell you everything to do. There were occasions when I had to read the instructions several times to understand what they were talking about, but very seldom did I have to call Stoddard-Hamilton to ask them how to interpret their plans. They were just very well done. I might say that Stoddard-Hamilton is probably one of the best organizations I've ever dealt with. I'm in business for myself so I've dealt with a lot of them and these people are the most cooperative and easy to work with you can imagine. I can call them at any time, ask a stupid question and they will spend whatever time is necessary trying to explain what to do or what not to do. This was very important to me because building airplanes was not my thing when I started. I'm a businessman and I spend most of my time behind a desk, but with their help, it has been a great experience building the Glasair. I've really enjoyed it."

Bill came up with a few ideas of his own that greatly aided in the building process. One of them was the construction of a fiberglass wheeled "cradle" in which to place the fuselage so it could be easily moved



Bill Speyer

about as needed. The wing came next and after completion, was mated to the fuselage inside his 2-car garage/workshop. The resulting structure was too large to get out of the door, however, so the wing was removed and all of the completed parts were taken to an airport hangar for assembly.

Bill's engine is a rebuilt fuel injected, 160 hp Lycoming IO-320 B1A out of a Twin Comanche. The Hartzell CS prop is new and was purchased through Stoddard-Hamilton. Among the more challenging tasks in the building process was the installation and proper alignment of the retractable landing gear. "It was a very involved job, but nothing someone with a little mechanical ability couldn't handle," Bill recalls.

After the basic structure was completed and the major systems were installed, Bill moved inside the cockpit and spent a great deal of time on the instrument panel. In addition to the necessary engine and flight instrumentation, his electronic goodies include dual navcoms, a transponder with encoder,

NDB . . . all by King . . . and an Apollo 604 Ioran. Bill will use the Glasair on occasion for business, so he wanted it to be well equipped. When the time came to upholster the cockpit, he turned that job over to a professional. An artisan who specializes in upholstering boats did the work, using Chevy Camaro material — gray with red trim. The instrument panel was painted red, to match the outside red trim.

Bill was more involved with the exterior paint job. He did all the preparation, the filling and sanding, and masked all the stripes, but had a Dayton body shop do the spraying. Deltron polyurethane was used, with a couple of coats of clear coming at the end of the process to provide both protection and the "wet" look everyone strives for these



days. The paint job is one of the few regrets Bill has concerning his airplane. His was one of the early Glasair kits with a gel coat finish, which by his estimate means about 50 additional pounds of empty weight. As we have pointed out in other articles on Glasairs, designer Tom Hamilton's original idea was to provide a white gel coat finish on all exterior surfaces of the airframe so builders would not have to paint them. It turned out to be impossible to maintain the same shade of white on all parts, however, so most builders resorted to painting . . . and in doing so, incurred the weight penalty of what amounted to two paint jobs. Recently, Stoddard-Hamilton stopped using gel coat, but Bill's kit was produced before that move was made. He

could have sanded the gel coat off, but in all likelihood he would still be at it! He chose to accept the weight penalty instead.

When completed . . . after 3,100 hours of labor stretched out over four years . . . Bill's Glasair weighed 1,260 pounds. He had hoped he would sneak in a little under 1,200, but it was not to be. Still, with the super paint job, luxurious interior and IFR panel, he knew he had done a good job of weight control and is pleased with the airplane. Having flown a lot of higher performance light-planes, like the Mooney, Bill did not experience any problems flying the RG . . . and quickly began enjoying its superb performance. He found the rate of climb to be around 2,000 fpm at 130 mph and cruise to be a solid 225 mph.

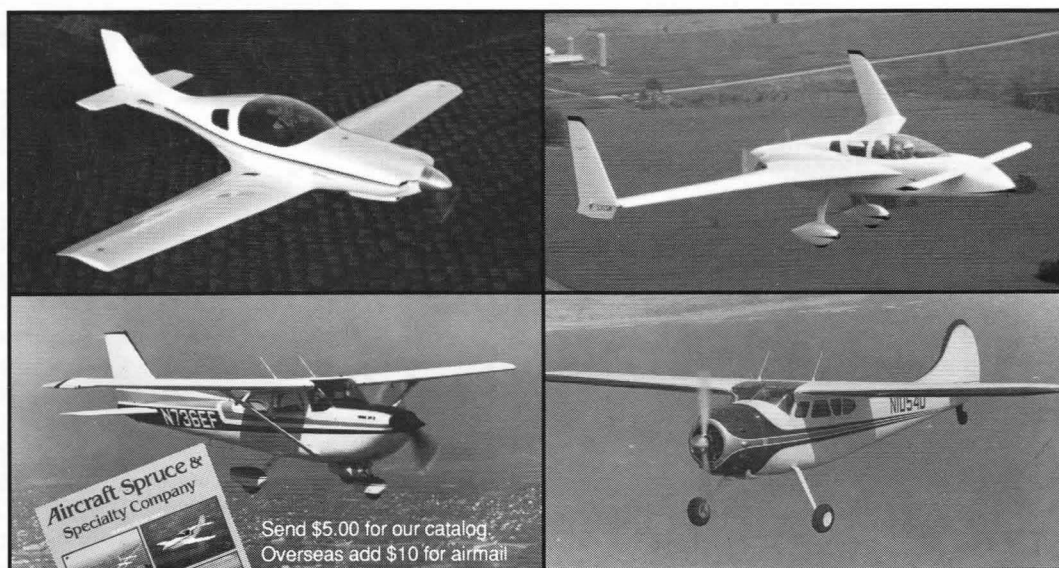
Bill did experience some problems during his test flight period . . . which is why FAA requires one in the first place. He had some right wing heaviness initially and was not able to trim it out with his fixed aileron tab. Eventually, he called Stoddard-Hamilton and was advised to rerig his flaps. "I disconnected the flap stop and cranked the turnbuckle on the control 1/2 turn. On the subsequent test flight, the airplane flew like a dream — hands off. They really know all the tricks!"

A more difficult problem involved fuel flow to the engine. The engine would start normally but would hesitate when the throttle was opened. It would catch up and run at high rpm, but the hesitation was always there. Bill was not about to live with such a condition, so he began changing every component of the fuel system in an effort to find the problem. He replaced the fuel injector, the flow divider, all the injector nozzles, the injector lines, the fuel pump . . . but the hesitation persisted. Eventually he discovered a flaw in the fuel line from the injector body to the flow divider . . . a little piece of rubber that would flip up when the throttle was opened to momentarily restrict the flow, then allow it to return to normal when it bent over past vertical. When the problem was isolated to that particular line and the engine ran normally after it was replaced, the original line was cut open and the flaw was revealed. It took a very frustrating month to smoke it out, however.

When I talked to him at MERFI, Bill was very pleased with his RG. He was very impressed with the performance and was feeling very much at home with the control response, which he had found to be quicker than in the factory airplanes he had previously flown. The only thing he wanted to do to the airplane was switch to electric actuation for the trim and flaps. The manual system worked fine, he said, but he was accustomed to electric actuation and simply preferred it to pawing on trim wheels and yanking on flap handles.

Just having flown off his test time and free at last to range out to wherever he desired to fly, Bill was looking forward to some serious cross country work. With 44 gallons of fuel in the wing and a 5 gallon header tank . . . and a fuel consumption of 8 gph at 225 mph . . . he was anticipating the first 1,000 mile plus leg of his flying career.

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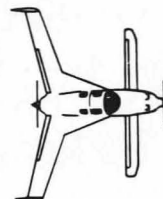
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